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Of *Colcheſter*, in *ESSEX*.

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THE

PREFACE.

IT would be as unneceſſary to expatiate on the Uſefulneſs of this TRACT as to make Apologies for compoſing it, for the Advantages which will inevitably accrue to all thoſe who are concern'd in BUILDING will manifeſtly appear at the firſt Inſpection.

Therefore this Subject wants no florid Pen to ſet it forth, or the alluring Charms of Rhetorick to recommend it, for which Reaſon, I ſhall leave the Reader to determine of its MERIT, by the plain, naked and undeniable *Facts* and Obſervations, he will meet with in the *Work*: For if the *Book* cannot be ſupported by that, an Encomium on the Subject will but render it the more ridiculous and contemptible.

Therefore all that I ſhall, or need to ſay, is, That I have eudeavoured as much as was in my Power, to be as correct as poſſible in what I have advanced with Reſpect to the *Prices* of *Work*, ſo as neither to ſet down more or leſs than what is uſual, and what it is really worth between Man and Man; for were I to do otherwiſe, let the Exceſs be on either Side, it would be more deſtructive to my own Intereſt, than to that of the Publick, as I could eaſily prove, were it either neceſſary or material ſo to do.

The greateſt Part of the *Prices* here inſerted, are what I have from Time to Time for ſeveral Years paſt, collected from my own Obſervations and daily Experience in Practice, and from Converſation with, and enquiring of other

Workmen of known *Abilities* about ſuch Things as I was not ſo well acquainted with, and theſe *Prices* are ſuch as do generally agree with the cuſtomary ones here and at *London*.

But here it may be objected, That as the Prices of Work in different Parts of this Kingdom, is not the ſame it cannot be ſo univerſally uſeful as otherwiſe it would.

To which I anſwer, That if I were to be rightly informed of the different *Prices* of Work, of every Town and County in *England*, I ſhould have forbore to inſert them, becauſe it would be apt to breed Confuſion, and thereby fruſtrate the Deſign of its being a uſeful Companion to my owu Countrymen. But as I have ſhewn what Quantity of Materials is required for the accompliſhing of one *Yard, one Square, one Rod, &c.* of ſuch Sorts of Work as are done by thoſe Meaſures, it cannot fail, nor be denied, but that it muſt in the general be of Uſe throughout the whole Kingdom.

To conclude, I hope this ſmall Treatiſe will be a Means of promoting diſtributive Juſtice to all Men, in ſuch Things as relate to a *BUILDING*, whereby both *Maſters* and *Workmen* ſhall have what is right and equitable between them; and as well prevent *Gentlemen* from being impos'd upon by fraudulent crafty *Workmen*, as ignorant *Workmen* from taking their Work at too low a Price, which oftentimes proves of dangerous Conſequence to them; (*viz.* the *Ruin of themſelves and their Families*,) and that purely by Means of unadviſed Contracts.

I could proceed to ſhew, That for Gentlemen or Workmen to be kept in Ignorance of the Value or Prices of Work is deſtructive to the Trade in general; but, as this is not material, I ſhall conclude with wiſhing it may prove as univerſally uſeful as intended, by,

Yours, &c.

WILLIAM SALMON, *Jun.*

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TABLE I. *This Table ſhews the Value of one Foot of Oak, cut to any Scantling or Size fit for Building at the Rate of Fiftee*

	2		2½		3		3½		4		4½		5		5½		6		6½		7		7½		8		8
	d	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*
12	2	2	3	0	3	3	4	1	5	0	5	2	6	1	6	3	7	2	8	0	8	3	9	1	10	0	10
11½	2	1	2	3	3	2	4	0	4	3	5	1	6	0	6	2	7	0	7	3	8	1	9	0	9	2	10
11	2	1	2	3	3	1	4	0	4	2	5	0	5	3	6	1	6	3	7	1	8	0	8	2	9	0	9
10½	2	0	2	2	3	1	3	3	4	1	4	3	5	2	6	0	6	2	7	0	7	2	8	1	8	3	9
10	2	0	2	2	3	0	3	2	4	0	4	2	5	0	5	3	6	1	6	3	7	1	7	3	8	1	8
9½	2	0	2	1	2	3	3	2	3	3	4	2	4	3	5	1	5	3	6	1	6	3	7	2	7	3	8
9	1	3	2	1	2	3	3	1	3	3	4	0	4	2	5	0	5	2	6	0	6	2	7	0	7	2	7
8½	1	3	2	0	2	2	3	0	3	2	4	0	4	1	4	3	5	1	5	3	6	0	6	2	7	0	7
8	1	2	2	0	2	2	2	3	3	1	3	3	4	0	4	2	5	0	5	1	5	3	6	1	6	2	
7½	1	2	2	0	2	1	2	2	3	0	3	2	3	3	4	1	4	2	5	0	5	2	5	3			
7	1	1	1	3	2	0	2	2	2	3	3	1	3	2	4	0	4	1	4	3	5	0					
6½	1	1	1	2	2	0	2	1	2	2	2	0	3	1	3	3	4	0	4	1							
6	1	1	1	2	1	3	2	0	2	2	2	3	3	0	3	1	3	3									
5½	1	0	1	1	1	2	2	0	2	1	2	2	2	3	3	0											
5	1	0	1	1	1	2	1	3	2	0	2	1	2	2													
4½	0	3	1	0	1	1	1	2	1	3	2	0															
4	0	3	1	0	1	1	1	1	1	2																	
3½	0	2	0	3	1	0	1	1																			
3	0	2	0	3	0	3																					
2½	0	2	0	2																							
2	0	1																									

N.B. *This Table will do for the Valuing of Wa*

of Oak, or *any other Timber that is ſquared and*
of Fifteen Pence per *Foot Cubical Meaſure.*

8		8 ½		9		9 ½		10		10 ½		11		11 ½		12	
d	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*
10	0	10	2	11	1	11	3	12	2	13	0	13	3	14	1	15	0
9	2	10	1	10	3	11	1	12	1	12	2	13	0	13	3		
9	0	9	2	10	1	10	3	11	2	12	0	12	2				
8	3	9	1	9	3	10	1	11	0	11	2						
8	1	8	3	9	1	9	3	10	1								
7	3	8	1	8	3	9	1										
7	2	7	3	8	1												
7	0	7	2														
6	2																

g of Waney Pieces of Fir.

TABLE II. *This Table ſhews the Value of one*
out to any Scantling or Size fit for Building at the

	2		2½		3		3½		4		4½		5		5½		6		6½		7
	d	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*
12	3	0	3	3	4	2	5	1	6	0	6	3	7	2	8	1	9	0	9	3	10
11	2	3	3	2	4	1	5	0	5	3	6	2	7	1	7	3	8	2	9	1	10
11	2	3	3	1	4	0	4	3	5	2	6	1	6	3	7	2	8	1	8	3	9
10½	2	2	3	1	4	0	4	2	5	1	5	3	6	2	7	1	7	3	8	2	9
10	2	2	3	0	3	3	4	1	5	0	5	2	6	1	6	3	7	2	8	1	8
9½	2	1	3	0	3	2	4	0	4	3	5	1	5	3	6	2	7	0	7	3	8
9	2	1	2	3	3	1	3	3	4	2	5	0	5	2	6	1	6	3	7	1	7
8½	2	0	2	2	3	0	3	2	4	1	4	3	5	1	5	3	6	1	6	3	7
8	2	0	2	2	3	0	3	2	4	0	4	2	5	0	5	2	6	0	6	2	7
7½	1	3	2	1	2	3	3	1	3	3	4	1	4	3	5	0	5	2	6	0	6
7	1	3	2	1	2	2	3	0	3	2	4	0	4	1	4	3	5	1	5	3	6
6½	1	2	2	0	2	1	2	3	3	1	3	2	4	0	4	2	4	3	5	1	
6	1	2	1	3	2	1	2	2	3	0	3	1	3	3	4	0	4	2			
5½	1	1	1	3	2	0	2	1	2	3	3	0	3	1	3	3					
5	1	1	1	2	1	3	2	0	2	2	2	3	3	0							
4½	1	0	1	1	1	2	1	3	2	1	2	1									
4	1	0	1	1	1	2	1	3	2	0											
3½	0	3	1	0	1	1	1	2													
3	0	3	1	0	1	0															
2½	0	2	0	3																	
2	0	2																			

N.B. *This Table will do for Valuing of Fir ſawn to an*

s of one Foot of Oak, or any other Timber that is ſquared and
at the Rate of Eighteen Pence per *Foot Cubical Meaſure.*

6½		7		7½		8		8½		9		9½		10		10½		11		11½		12	
d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q
9	3	10	2	11	1	12	0	12	3	13	2	14	1	15	0	15	3	16	2	17	1	18	0
9	1	10	0	10	3	11	2	12	0	13	0	13	2	14	1	15	0	15	3	16	2		
8	3	9	2	10	1	11	0	11	2	12	1	13	0	13	3	14	1	15	0				
8	2	9	0	9	3	10	2	11	0	11	3	12	2	13	0	13	3						
8	1	8	3	9	1	10	0	10	2	11	1	11	2	12	2								
7	3	8	1	9	0	9	2	10	0	10	2	11	1										
7	1	7	3	8	2	9	0	9	2	10	0												
6	3	7	1	8	0	8	2	9	0														
6	2	7	0	7	2	8	0																
6	0	6	2	7	0																		
5	3	6	0																				
5	1																						

wn to any Scantling, or for Oak ſawn but on one Side, or only hew

TABLE III. *This Table ſhews the Value of Oak, or any Scantling or Size fit for Building at the Rate of One and*

	2	2 ½	3	3 ½	4	4 ½	5	5 ½	6	6 ½	7	7 ½
	d q	*d q*	*d q*	*d q*	*d q*	*d q*	*d q*	*d*	*d q*	*d q*	*d q*	*d q*
12	3 2	4 1	5 1	6 0	7 0	7 3	8 3	9 2	10 2	11 1	12 1	13 0
11½	3 1	4 0	5 0	5 3	6 3	7 2	8 1	9 0	10 0	11 0	11 2	12 2
11	3 1	4 0	4 3	5 2	6 1	7 1	8 0	8 3	9 2	10 1	11 1	12 0
10½	3 0	3 3	4 2	5 1	6 0	6 3	7 2	8 1	9 0	9 3	10 3	11 2
10	2 3	3 2	4 1	5 0	5 3	6 2	7 1	8 0	8 3	9 2	10 0	10 3
9½	2 3	3 2	4 0	4 3	5 2	6 1	6 3	7 2	8 1	9 0	9 2	10 1
9	2 2	3 1	4 0	4 2	5 1	5 3	6 2	7 1	7 3	8 2	9 0	9 3
8½	2 2	3 0	3 3	4 1	5 0	5 2	6 1	6 3	7 1	8 0	8 3	9 1
8	2 1	2 3	3 2	4 0	4 3	5 1	5 3	6 2	7 0	7 2	8 0	8 3
7½	2 1	2 3	3 1	3 3	4 1	5 0	5 2	6 0	6 2	7 0	7 2	8 1
7	2 0	2 2	3 0	3 2	4 0	4 2	5 0	5 2	6 0	6 2	7 0	
6½	1 3	2 1	2 3	3 1	3 3	4 1	4 3	5 1	5 3	6 1		
6	1 3	2 1	2 2	3 0	3 2	4 0	4 1	4 3	5 1			
5½	1 2	2 0	2 2	2 3	3 1	3 2	4 0	4 0				
5	1 2	1 3	2 1	2 2	2 3	3 1	3 2					
4½	1 1	1 3	2 0	2 1	2 2	2 3						
4	1 0	1 2	1 3	2 0	2 1							
3½	1 0	1 1	1 2	1 3								
3	0 3	1 0	1 1									
2½	0 2	0 3										
2	0 2											

N.B. *This Table will do for the Valuing of Oak ſawn but*

, or any other Timber that is ſquared and cut to any
One and twenty Pence per *Foot Cubical Meaſure.*

	7 ½		8		8 ½		9		9 ½		10		10 ½		11		11 ½		12	
q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q
1	13	0	14	0	14	3	15	3	16	2	17	2	18	1	19	1	20	0	21	0
2	12	2	13	1	14	0	15	0	15	3	16	3	17	2	18	1	19	1		
1	12	0	12	3	13	2	14	2	15	1	16	0	16	3	17	2				
3	11	2	12	1	13	0	13	2	14	2	15	1	16	0						
0	10	3	11	2	12	1	13	0	13	3	14	2								
2	10	1	11	0	11	3	12	1	13	0										
0	9	3	10	2	11	0	11	3												
3	9	1	9	3	10	2														
0	8	3	9	1																
2	8	1																		
0																				

wn but of two Sides, or of four Sides, if much waney.

TABLE IV. *This Table ſhews the Value of one Foo*
and cut to any Scantling or Size fit for Building at the

	2		2½		3		3½		4		4½		5		5½		6		6½		7	
	d	*q*	*d*	*q*	*d*		*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*	*d*	*q*
12	4	0	5	0	6	0	7	0	8	0	9	0	10	0	11	0	12	0	13	0	14	0
11½	3	3	4	2	5	3	6	2	7	2	8	2	9	2	10	2	11	2	12	1	13	1
11	3	2	4	2	5	2	6	1	7	1	8	1	9	0	10	0	11	0	11	3	12	3
10½	3	2	4	1	5	1	6	0	7	0	7	3	8	3	9	2	10	2	11	1	12	1
10	3	1	4	0	5	0	5	3	6	2	7	2	8	1	9	0	10	0	10	3	11	2
9½	3	0	3	3	4	3	5	2	6	1	7	0	7	3	8	2	9	2	10	1	11	0
9	3	0	3	2	4	2	5	1	6	0	6	3	7	2	8	1	9	0	9	3	10	2
8½	2	3	3	2	4	1	4	3	5	2	6	1	7	0	7	3	8	2	9	0	9	3
8	2	2	3	1	4	0	4	2	5	1	6	0	6	2	7	1	8	0	8	2	9	1
7½	2	2	3	0	3	3	4	1	5	0	5	2	6	1	6	3	7	2	8	0	8	3
7	2	1	2	3	3	2	4	0	4	2	5	1	5	3	6	1	7	0	7	2	8	0
6½	2	0	2	2	3	1	3	3	4	1	4	3	5	1	5	3	6	2	7	0		
6	2	0	2	2	3	0	3	2	4	0	4	2	5	0	5	2	6	0				
5½	1	3	2	1	2	3	3	1	3	2	4	0	4	2	5	0						
5	1	2	2	0	2	2	2	3	3	1	3	3	4	0								
4½	1	2	1	3	2	1	2	2	3	0	3	1										
4	1	1	1	2	2	0	2	1	2	2												
3½	1	0	1	1	1	3	2	0														
3	1	0	1	1	1	2																
2½	0	3	1	0																		
2	0	2																				

N.B. *This Table will do for Oa*

one Foot in Length of Oak, or any other Timber that is ſquared
ng at the Rate of Two Shillings per *Foot Cubical Meaſure.*

½		7		7 ½		8		8 ½		9		9 ½		10		10 ½		11		11 ½		12
	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d	q	d
3	0	14	0	15	0	16	0	17	0	18	0	19	0	20	0	21	0	22	0	23	0	24
2	1	13	1	14	1	15	1	16	1	17	1	18	1	19	0	20	0	21	0	22	0	
1	3	12	3	13	3	14	2	15	2	16	2	17	1	18	1	19	1	20	0			
1	1	12	1	13	0	14	0	14	3	15	3	16	2	17	2	18	1					
0	3	11	2	12	2	13	1	14	0	15	0	15	3	16	2							
0	1	11	0	11	3	12	2	13	1	14	1	15	0									
9	3	10	2	11	1	12	0	12	3	13	2											
9	0	9	3	10	2	11	1	12	0													
8	2	9	1	10	0	10	2															
8	0	8	3	9	1																	
7	2	8	0																			
7	0																					

do for Oak ſawn all four Sides.

THE *BUILDER*'s Companion.

SECT. I.

Of the Prices of ſuch Materials as are required in BULDING.

I SHALL in this Section, ſet down the General *Prices* of all, or moſt, of the Principal Materials required in Building; as a Foundation for the enſuing Work. But firſt, I would have the Reader obſerve, That the *Carriage* of all *Materials*, is excepted; Therefore, whenever you make Uſe of this Treatiſe to Eſtimate a Building; or any Part thereof, the Charge of carrying the Materials to the Work, muſt be Enquired into and added to the Eſtimation, for to find out the exact Charge of the Whole.

Therefore to proceed to what I firſt propoſed, viz. *The Price of the Materials.*

	l.	*s.*	*d.*
BRICKS *per* Thouſand from 15 to 20 *s.* or —	1	5	0
Cutting *Bricks* for rubb'd and gauged Work at *per* Thouſand from 40 *s.* to ——	2	10	0
Plain-Tiles per Thouſ. fr. 18 *s.* to	1	0	0
Pan-Tiles per Hundr. from 7 to	0	8	0
Dutch glaz'd *Pan-Tiles per* Hund.	0	10	0
Gutter-Tiles per Hund. fr. 12 to	0	16	0
Lime per Buſhel, fr. 5 *d.* to 6 *d.* or	0	0	8
Lime per Load, 32 Buſhls. fr. 15 to	0	18	0
Sand per Load, 36 Buſhls. from 2 *s.* 6 *d.* to —— ——	0	3	0

	l.	*s.*	*d.*
Hair per Buſhel, from 5 *d.* to —	0	0	7
Flemiſh Bricks *per* Hundred —	0	2	0
Nine-Inch *Paving-Tiles, per* Hundred, from 7 *s.* to —	0	8	0
Pebbles, at *per* Ton from 16 *s.* to	1	0	0
Gravel, at *per* Load ——	0	0	0
Rags, at *per* Ton —— ——	0	10	6
Flanders Bricks, per Thouſand	1	0	0
Oak Timber, cut to Scantlings fit for *Building, per* Load, fr. 3*l.* to	4	0	0
Fir-Timber, cut to Scantlings, fit for *Building, per* Load,	2	10	0
Deal Tile-pins, per Buſhel ——	0	3	0
Oak Ditto —— ——	0	4	0
Portland-Stone in Blocks *per* Foot,	0	2	3
Ditto Slabs, Inch and half thick,	0	1	6
Purbeck Stone Slabs, poliſh'd	0	2	0
Purbeck Paving at promiſcuous Sizes, only hew'd and ſquar'd is about 7*d.* or 8*d.* *per* Foot; alſo *Mitchels* are valued at about 1 *s.* 10 *d.* *per* Foot.			
Free-Stone ſquar'd for *Paving, per* Foot, from 12 *d.* to	0	1	2
Dit. ſquar'd and poliſh'd fr. 15*d.* to	0	1	4
5 Foot Heart-*Laths, Oak, per* Bun.	0	2	2

	l.	*s.*	*d.*
4 Foot Heart-*Laths,*	0	2	0
5 Foot Sap-*Laths, Oak, per* Bund.	0	1	6
4 Foot Sap	0	1	4
Fir-Laths, per Bundle	0	1	6
Thatching-Lath, per Bundle	0	1	6
5 Foot *Cleft-Pale, per* Hundred	0	12	0
4 Foot *Pale, per* Hundred	0	10	0
Eaves-Boards, per Pair	0	1	6
Lead, per Hund. from 18 *s.* to	1	0	0

SECT. II.

Of Carpenters *WORK.*

THE Work done by *Carpenters*, are, chiefly Framing of Houſes, Bridges, Barns, Stables, Floors, Partitions, Roofs, *&c.* Making of Doors, Windows, Stair-Caſes, Corniſhes, Frontiſpieces, Modillion-Corniſhes, Cove-Eaves, and all ſorts of boarded Floors; alſo, Weather-boarding, and Fencing of all ſorts.

In ſpeaking of which, I ſhall make each Article a diſtinct Head by itſelf, and keep to that Order throughout the whole Book, it being, in my Opinion, the beſt way of proceeding, to avoid Confuſion, and the more eaſily referr'd to upon Occaſion.

I ſhall likewiſe, under each Head, treat of the cuſtomary way of taking Dimenſions, and Meaſuring each Artificer's Work employ'd in Building.

ARTICLE I.

Of Framing the out-ſide Carcaſe of a Houſe.

Firſt, of the Meaſuring.

THE Out-ſide Carcaſe of a Houſe, as alſo, Floors, Partitions, Roofs, Barns, and Stables, are meaſured by the Square, containing one Hundred ſuperficial Feet, or ten Foot every way; by the ſame Method, Flooring, Tileing, Thatching, and Weather-boarding, are alſo meaſured.

To Meaſure the Body of a Timber Building.

Take the Length of one Side, and one End, and add them together: and their Sum multiply'd into the Heighth, (taken from the Under-ſide of the Cell, to the Up-ſide of the Raiſing,) gives the Content of one Side and one End; which being doubled, is the Content of the whole Body, or Out-ſide Carcaſe of the Building, in Feet.

To bring the Content found into Squares, divide the Product by one Hundred, or cut off from the Product, two Figures towards the Right Hand, and the remaining Figures, are ſo many Squares, and the Figures cut off, are Feet.

The PRICE.

	l.	*s.*	*d.*
Firſt, For Framing the Out-ſide Carcaſe of a Houſe, to hew and ſaw all the Timber for Workmanſhip only, at *per Squ.*	0	10	0
Excluſive of hewing and ſawing	0	4	6

If

	l.	*s.*	*d.*
If with Old Timber and made ſtraight on both Sides, for Work only *per Square.*	0	6	0
For Workmanſhip, and all Materials, of *New Oak,* at *per Square* ——	2	4	0
Ditto, of *Fir*	1	12	0

Note, The *Studds,* or Quarters, to ſtand twelve Inches aſunder.

The Scantlings, and Price of the Stuff, according to this Computation, of Oak, *is as follow:*

The Scantlings of the Cells and Overways 6 by 7, at 6 *d. per Foot.* The Poſts in the Middle, 6 by 8, at 8 *d. per Foot*; the Raiſings, 8 by 5, at 6 *d. per Foot,* and the Studds 3 by 4 at 2 *d. per Foot.*

Note, If you would know the Value of a Square of Carcaſeing with Oak Timber, cut to any larger Scantling than what is above-mentioned, you muſt conſider how many Feet of Timber is wanting of each Scantling, and ſeek the Value thereof at *per Foot* by the fourth Table at the latter End of this Treatiſe, and caſt up how much ſuch a Number of Feet comes to at ſuch a Price *per* Foot, of each of the Scantlings required; and ſee what they all amount to: then conſider how many Square is contained in the Work, and to the Prices of the Timber add ſo many Square of Framing at ſo much *per* Square for the Labour; conſider alſo how many Nails are wanting, if you are to find them; and, laſtly, what the Whole amounts to, and divide that Sum by the Number of Squares contained in the Work, and the Quotient, is the Price *per* Square ſought for.

To a Square of Framing, there may be allowed, twenty Foot of rough Timber, which is a ſufficient Quantity for common Buildings.

ARTICLE II.

Of Framed Floors.

THE Particulars to be obſerved in meaſuring of Floors that are framed, are,

Firſt, They are meaſured by the Square [as is taught under the preceeding Article.]

Secondly, In taking Dimenſions thereof, you allow for the Length of the Joiſt laid into the Wall.

The PRICE.

1. The Price of Framing of Floors, Carpenters Work only, from 4 *s.* 6 *d.* *per* Square, to 5 *s.*

2. If hewing and ſawing be included, at 10 *s.* *per* Square.

3. If the Workman find all Materials, if Oak, 1 *l.* 10 *s.* If Fir, 1 *l.* 2 *s.*

4. The Scantling and Price of the Oak-Timber, according to this Computation, is as followeth:

The Girders, 10 by 11 Inches, at 1 *s.* 6 *d. per* Foot. The Joiſt, 4 and a half, by 3 and a half, at *Two-Pence Half-Penny per* Foot.

If pou would have the Timbers cut to a larger Scantling, to find the Value of a Square thereof, obſerve the Directions noted under *Article* I.

5. Aſhlering, or Ceiling Floors, Stuff 3 by 4, at 16 *s. per* Square.

6. *Note*, The Joiſts to be laid about twelve Inches aſunder.

7. If the Girder be twelve Inches ſquare, and the Joiſt be 7 by 4, or if the whole Depth of the Girder, it is worth, of Oak, 2 *l.* 5 *s. per* Square.

Of Fir, 1 *l.* 13 *s.*

Note, There is no Difference between the Price of Joiſt, 6 or 7 Inches deep, and thoſe of a Foot; for what is added to the Depth, is taken off the Thickneſs.

8. There is about twenty or twenty-two Foot of rough Timber to the Square.

ARTICLE III.

Of Framed Partitions, *&c.*

THE Particulars to be obſerved in meaſuring Partitions, (beſides that of its being meaſured by the Square,) is, That you deduct the Doors and Windows contained therein, except they are agreed to be included.

The PRICE.

1. For framing Partitions, Workmanſhip only, from 3 *s.* 6 *d.* to 4 *s. per Squ.*

2. If the Workman find all Materials, and the Scantling of the Stuff be 3 by 4, or 6 by 2, which is all of a Price, if Oak, 1 *l.* 4 *s.* If Fir, 16 *s. per Squ.*

3. The Sawing the Stuff, is about equal to the Carpenter's Work.

Boarded Partitions.

1. BOarded Partitions, with rough ſlit Deal, at 14 *s. per* Square, Workmanſhip, 2 *s.* 6 *d.*

2. Whole Deal, plained on one Side, at 2 *s.* 6 *d. per* Yard; Labour only 10 *d. per* Yard.

3. Plained on both Sides, at 3 *s. per* Yard; Labour only at 12 *d. per* Yard.

4. Ditto, grooved, tongued, ledged, or batten'd, at 3 *s.* 6 *d. per* Yard, ſingle Meaſure; Workmanſhip, 1 *s.* 3 *d. per* Yard.

5. Whole Deal and Slit Deal Partitions, grooved and plained on both Sides, at 2 *s. per* Yard, ſingle Meaſure; Workmanſhip 10 *d. per* Yard.

6. Two Inch Stuff, plained on one Side, at 3 *s. per* Yard; Labour at 1 *s.*

7. Ditto, plained on both Sides, 3 *s.* 8 *d.* Workmanſhip, 1 *s.* 5 *d.*

8. Ditto, grooved, tongued, ledged, or batten'd, at 4 *s.* 6 *d. per* Yard; Workmanſhip, 1 *s.* 8 *d.*

ART.

ARTICLE IV.

Of Framing of ROOFS.

WHEN you take the Dimenſions of a Roof, meaſure the Length and Breadth of the *Building* to the utmoſt Extent of the Walls and adding to that Product, half as much more will be the *Content* provided it be made to what is commonly called *true Pitch*, when the Length of the Rafter is three-fourths of the Span or Breadth of the *Building*. But if the *Pitch* or *Slope* be different, you muſt multiply the Length of the Rafter, by the Length of the Front, and twice that Product, is the Content.

And this RULE will be *general* for all *Roofs* whatſoever, for let them have either *Gable Ends* or *Hip Ends*, the Meaſure will be the ſame, as is more clearly demonſtrated at the End of this Section.

The PRICE.

1. For Framing of Purline Roofs, Workmanſhip, including hewing and ſawing the Stuff, from 8 *s.* to 10 *s.* *per* Square; excluſive of hewing and ſawing from 4 *s.* 6 *d.* to 5 *s.* *per* Square.

2. Work, and Stuff, of Oak, including Plates, at 1 *l.* 3 *s.* 6 *d.* Excluſive of Plates, 1 *l.* 2 *s.* 6 *d.* *per* Square.

3. If Fir, including Plates, 16 *s.* 10 *d.* *per* Square. Excluſive of Plates, 15 *s.* 10 *d.*

4. The Scantling of the Rafters, according to this Computation, is 4 by 3 in the Middle, their Diſtance twelve Inches, and the Plates are 6 by 3.

5. Girt-Roofs, to frame, Workmanſhip only, from 4 *s.* 6 *d.* to 5 *s.* *per* Square.

6. Ditto, to frame, hew, and ſaw all the Stuff, from 10 *s.* to 12 *s.* *per* Square.

7. Workmanſhip, and all Materials, of Oak, 1 *l.* 15 *s.* *per* Square.

8. Ditto, of Fir, 1 *l.* 7 *s.* *per* Square.

9. The Scantling of the Stuff, according to this Computation, is thus:

Principal Raſters, 7 by 8 in the Middle; the ſmall Raſters 3 by 4, and the Purlines 8 by 5: The Collar-Beams three Inch Plank.

10. If Plates be included, and the Scantling of them are 4 by 7, if Oak, 1 *l.* 17 *s.* 6 *d.*

11. Ditto Fir, 1 *l.* 9 *s.* 6 *d.*

12. *Rafters Feet*, and *Eaves-boards*, 4 *d. per* Foot running.

ARTICLE V.

Of Framing Barns.

TO meaſure the Carcaſe of a Barn, is the ſame as to meaſure the Carcaſe of a Houſe, therefore, needs not be repeated. See *Article* I.

The PRICE.

1. The Price of framing the Carcaſe of a Barn, Workmanſhip only, from 3 *s.* 6 *d.* to 4 *s.* 6 *d.* and if hewing and ſawing the Timber be included, from 8 *s.* to 9 *s.* *per Square.*

2. Workmanſhip, and all Materials, of Oak, at 1 *l.* 10 *s. per Square.*

3. Ditto, Fir, 1 *l.* 6 *s.*

4. One Load of rough Timber, will do about two Squares and a half.

To build a Barn with all new Oak-Timber, to thatch, underpin, and weather-board with Feather-edged Deals, and to lay a new Floor with two Inch Oak Plank, finding all Materials is worth 9 *l. per Square, the Ground-plot only being meaſured.*

ARTICLE VI.

Of Framing Stables.

THE Method of taking Dimenſions, and meaſuring of Stables, is alſo the ſame as to meaſure the Carcaſe of a Houſe; therefore, I need only refer you to the *Firſt Article* of this Section.

The

The PRICE.

1. For Framing the Carcaſe of a Stable, Workmanſhip only, from 4 *s.* to 4 *s.* 6 *d. per Square.* If hewing and ſawing be included, from 8 *s.* to 9 or 10 *s. per Square.*

2. Ditto, Workmanſhip, and all Materials, of Oak, 1 *l.* 12 *s.*

3. Ditto, Fir, 1 *l.* 4 *s.*

N. B. Leaſt the Scantlings of the Timber, by which this Eſtimation is made, ſhould not be the ſame as your preſent Purpoſe require, it would therefore be the ſafeſt Way to obſerve the Directions given under *Article* I.

A TABLE,

Shewing what are the proper Scantlings to cut Timber to, fit for the Accompliſhment of any Building.

1. GIRDERS.

Length Feet.	*Scantling Inches.*
10	8 and 10
12	8½, and 10
14	9 and 10½
16	9½, and 10½
18	10 and 11
20	11 and 12
22	11½, and 13
24	12 and 14

2. TRIMING JOISTS.

Feet.	*Inches.*
5	3 and 7
6	4 and 7
7	5 and 7
8	4 and 8
9	5 and 8
10	6 and 9

3. *Of* JOISTS.

Leng Feet.	*Scantling Inches.*
6	7 and 2½
8	7 and 3
10	8 and 3
12	9 and 4

4. *Of* BEAMS.

Feet.	*Inches.*
12	6 and 8
16	6½, and 8½
20	6½, and 9
24	7 and 9½
28	7½, and 9½
32	8 and 10
36	8½, and 10½
40	8½, and 11
44	9 and 12

5. *Principal Rafters.*

From 12 to 14 Feet, muſt be 8 Inches at Bottom, 5 at Top, and 6 thick.

From 14 to 18 Feet, 9 Inches at Bottom, 7 at Top, and 7 thick.

From 18 to 21 Feet, 10 Inches at Bottom, 8 at Top, and 8 thick.

From 21 to 24 Feet, 12 Inches at Bottom, 9 at Top, and 8½ thick.

From 24 to 26 Feet, 13 Inches at Bottom, 9 at Top, and 9 thick.

Single Rafters.

Muſt have in their Squares, from 4 by 3, to 5 by 4.

Purlines, muſt be cut to a Scantling from 9 by 8, to 9 by 12, for large Buildings; but for common ſmall Buildings, from 4 by 5, to 5 by 6.

Raiſing Plates, from 9 by 6, to 8 by 5.

Principal Poſts, from 10 by 8, to 9 by 7, at Bottom, and to diminiſh upwards at Diſcretion, according to their Length.

Cells and Overways from 9 by 8, to 7 by 6.

The Prices at *per* Foot, to any of the above-mentioned Scantlings, are to be found, if of Oak, in the Fourth Table, at the latter End hereof; and if the Stuff be extraordinary good, without Sap, and large Scantlings, it may be valued at double the Price of the Firſt Table. If Fir, value it by the Second Table.

ARTICLE VII.

Of Boarded Floors.

BOarded Floors are meaſured by the Square, and the Particulars to be obſerved in taking Dimenſions, are, that you take the Dimenſions to the very extreme Parts; out of which you muſt deduct Stair-Caſes, Chimnies, *&c.*

The PRICE.

1. Rough whole Deal, clear of Sap; the Workmanſhip, 3 *s.* 6 *d.* *per*

Square; Work, Boards, and Nails, 1 *l.* 5 *s.*

2. Ditto, Liſted and ſhot clear of Sap, at 1 *l.* 8 *s.* *per* Square; Workmanſhip, 4 *s.* *per* Square.

3. Folded Joint Boarding, clear of Sap, at 1 *l.* 10 *s.* *per* Square; Workmanſhip, 5 *s.* *per* Square.

4. Common Straight Joint Boarding, clear of Sap, at 1 *l.* 12 *s.* *per* Square; Workmanſhip, 7 *s.* 6 *d.* *per* Square.

5. Second-beſt Boarding, nail'd, at 2 *l.* *per* Square; Workmanſhip, 8 *s.* *per* Square.

6. Ditto, *Dowell'd*, at 2 *l.* 5 *s.* Workmanſhip, 12 *s.* *per* Square.

7. Clean Deal Floors dowell'd, at 4 *l.* 10 *s.* *per* Square; Workmanſhip, 18 *s.* *per* Square.

8. Ditto, of long Boards, *viz.* 15 Foot and upwards, at 6 *l.* *per* Square; Workmanſhip, 1 *l.* 1 *s.* *per* Square.

9. If it be for a common Ground Floor, and you find Joiſts and lay them; and account the Joiſts at 2 *d.* *per* Foot, add 13 *s.* *per* Square to the Prices above exhibited. If the Joiſts be worth 2 *d.* $\frac{1}{2}$ *per*

per Foot, add 16 *s.* *per* Square to the above Prices: And if they be worth 3*d.* *per* Foot, add 19 *s.* But if you do not find the Joiſts but only have to lay them, then add for laying them from 1 *s.* to 2 *s.* *per* Square more to the Prices above.

Of Barn-Floors.

TO lay Barn Floors, with Oak Plank, *per* Square, *viz.* Laying Joiſts and all, at 5 *s.* 6 *d.* *per* Square. If you hew and ſaw the Plank, and the Plank be two Inches thick; and hew and ſaw the Joiſts alſo, from 12 *s.* to 14 *s.* *per* Square. To find all Materials, of Oak, 3 *l.* 10 *s.* *per* Square.

The Price of Joiſts and Plank, according to this Computation, is,

For Plank, 4 *d.* *per* Foot.
For Joiſts, 3 *d.* Ditto.

Note, An Allowance muſt be made for Waſte in jointing the Planks.

11. To lay a Barn Floor with double Deals, two Inches thick, and to Liſt off

the Sap, finding all the Materials, at 2 *l.* 10 *s.* *per* Square; Workmanſhip, 5 *s.* *per* Square.

12. Ditto, with three-Inch Deal, clear of Sap, 2 *l.* 18 *s.* *per* Square; the Work, 5 *s.* 6 *d.*

Note, The Joiſts are computed to be laid twelve Inches aſunder.

ARTICLE VIII.

Of Windows.

WINDOWS are generally made and valued by the Foot, ſuperficial Meaſure, and ſome Times by the Window; and when they are meaſured, the Dimenſions muſt be taken from the Under-ſide of the Cap-piece, for the Height; and for the Breadth, from Out-ſide to Out-ſide of the Jaumbs, and the Product of their Multiplication, is the ſuperficial Content.

The

The PRICE.

1. For making of Saſh-Frames of Deal-work, and all Materials, 7 *d. per* Foot; Workmanſhip, 2 *d.* ½, and 3 *d.* *per* Foot.

2. Saſh-Lights, of Deal-work, Inch and a half thick, at 7 *d. per* Foot; Workmanſhip, 3 *d. per* Foot.

3. Saſhes made of Wainſcot, Inch and a half thick, at 8 *d. per* Foot; and Workmanſhip, 4 *d. per* Foot.

4. *Girt* and *Lutheran* Windows, made of Oak, from 5 *d.* to 6 *d. per* Foot; Workmanſhip, 2 *d. per* Foot.

5. Ditto, of Fir, 4 *d. per* Foot; Workmanſhip, 1 *d.* ½ *per* Foot.

The Scantling of the Stuff, according to this Computation; is 3 by 4, for the Girt and Lutheran Windows.

6. Caſeing of Windows, from 1 *s.* 6 *d.* to 2 *s.* 6 *d. per* Window; Workmanſhip only from 6 *d.* to 1 *s. per* Window.

ART.

ARTICLE IX.

Of Stair-Caſes.

STAIR-Caſes, are meaſured by the Foot ſuperficial: And the Dimenſions are taken with a String girt over the Raiſner and Tread; and that Length or Girt, multiplied by the Length of the Step, the Product is the ſuperficial Content.

The PRICE.

1. Steps of common *Stairs, Strings* and *String-Boards,* and *Bearers* included, of Oak, 8 *d. per* Foot; the Work only 1 *d.* ½ *per* Foot.

2. Ditto, of Fir, 6 *d. per* Foot; Work only 1 *d. per* Foot.

3. Ditto, of ſecond-beſt Boards, *Strings, Bearers,* and plain *Brackets* included, at 9 *d. per* Foot; Workmanſhip only, at 1 *d.* ½ *per* Foot. Excluſive of Rails and Balluſters.

4. Ditto, with clean *Deals*, and carved *Brackets*, from 1 *s.* to 1 *s.* 6 *d. per Foot*; work only from 6 *d.* to 8 *d. per Foot.* Excluſive of Rails and Balluſters.

5. Rails and Balluſters, two Inches ſquare, at 2 *s. per Foot*; running; three Inches ſquare, at 2 *s.* 6 *d. per Foot*; four Inches ſquare, at 3 *s. per Foot*, running Meaſure.

6. If circular, or ramping, the Price muſt be double, or double Meaſure, which is the ſame Thing. This Rule muſt be obſerved for all circular-works in general.

ARTICLE X.

Of Doors and Door-Caſes.

1. DOors are meaſured by the Yard ſquare, containing, nine ſquare Feet.

2. Whole Deal-Doors, of two Pannels, are allowed, work and half work, or double work, if of two-Inch Stuff,

in Conſideration of their being wrought on both ſides.

The PRICE.

1. Common inſide Doors, of two Pannels, may be valued at the ſame Price, *per* Yard, as the ſame ſort of Work done in wainſcoting of Rooms: Therefore, to know the Value of a two Pannel Door, made with any ſort of work, look in the next *Section* for the ſame ſort of Work done in Wainſcoting of Rooms, and by the Prices there ſet down, together with the Obſervation of the above-mentioned Rules, you will quickly obtain the Prices required.

2. Common Two-pannel Doors, with Deal, wrought with a Quarter round and plain Pannels of about ſix Foot and a half high, and two Foot and a half wide: Caſeing the Jaumbs, and hanging the Door; Work, Stuff, and Nails, from 8 *s.* to 10 *s.* *per Door*; Workmanſhip from 3 *s.* to 4 *s.* *per Door.*

3. Doors of 6, 8, 10, or 12 Pannels in a Door, of Deal, are worth more or leſs, according to the Thickneſs and

Goodneſs of the Stuff and variety of the Workmanſhip, as follows:

4. Ditto, of 6 Pannels of Inch and a half Stuff, from 11 *s.* to 12 or 14 *s. per Door*; Workmanſhip only from 6 *s.* to 8 *s. per Door.*

5. Ditto, 8 Pannels in a Door, from 12 *s.* to 14 or 16 *s. per Door*; Workmanſhip only from 10 *s.* to 12 *s. per Door.*

7. Batten Doors, and Shop Window-Shutters of whole Deal, Nails included, from 9 *d.* to 10 *d. per Foot*; Workmanſhip from 3 *d.* to 4 *d. per Foot.*

Of framed *Door-Caſes.*

FRamed Door Caſes are worth for Workmanſhip only, from *Three Half-pence* to *Two-pence* per Foot, ſuperficial Meaſure.

The Stuff muſt be valued according to the Scantling, as ſet down in the Fourth Table at the latter End of this Book.

ARTICLE XI.

Of Modillion Corniſhes, Cove-Eaves, *&c.*

MOdillion Corniſhes, Cove Eaves, and Dentil Corniſhes, are generally meaſured and valued by the Foot ſuperficial.

The PRICE.

1. Plain Out-ſide Corniſhes, out of whole Deal, at 9 *d. per Foot*; Workmanſhip only 6 *d. per Foot.*

2. Plain Modillion Corniſhes, or cut Dentils, at 1 *s.* 6 *d. per Foot*, ſuperficial Meaſure; Workmanſhip only 10 *d. per Foot.*

Note, Under theſe two Heads is comprehended the Prices of any ſort of Corniſh-Eaves, wrought according to any of the Five Orders of Architecture; carving and ſcaffolding only excepted.

Cove-Eaves.

3. Cove-Eaves with a Bed-moulding Facio and Corniſh, at 1 *s. per Foot* ſuperficial; the Workmanſhip of Carpenters work only 6 *d. per Foot.*

4. Guttering and Bearers, of Oak, 8 *d. per Foot*; of Fir, 6 *d. per Foot* ſuperficial.

Square Trunks made to bring down the Water from off the Top of the Houſe of Oak 10 *d. per* Foot, of Fir, at 8 *d. per Foot* lineal Meaſure.

ARTICLE XII.

Of Weather-Boarding.

WEather-Boarding is done by the Yard Square, and ſometimes by the Square of 100 ſuperficial Feet.

The PRICE.

1. Weather-Boarding with Feather-

edg'd Deal, at 1 *s.* 6 *d. per Yard*; by the Square, the Boards plained and beaded, at 15 *s. per ſquare*; Workmanſhip, at 3 *d. per Yard.*

2. Ditto, neither plained nor beaded, at 14 *s. per ſquare*; Work-manſhip, 2 *s. per ſquare.*

3. Ditto, at *per Yard,* 1 *s* 3 *d.* Workmanſhip, *Three Half-pence per* Yard.

4. Weather-Boarding with Oak-Boards, plained and beaded at 20 *s. per ſquare*; Workmanſhip 3 *s. per ſquare.*

Here follows a Table, which ſhews how many Boards 10 *Foot long, at* 5 *ſeveral Gauges, will compleat a Square.*

The TABLE.

			Boards.		*Inches over*
At a	9	Inch Gauge	13	and	3
	8		15		0
	7		17		1
	6		20		0
	5		24		0

ART-

ARTICLE XIII.

Of Frontiſpieces.

FRontiſpieces are meaſured by the Foot ſuperficial Meaſure, and the Dimenſions are taken with a String girt down all the Mouldings.

The PRICE.

1. A Frontiſpiece according to the *Tuſcan* or *Dorick* Order, if made with *Norway* Oak, 1 *s.* 6 *d. per Foot*; Workmanſhip, 9 *d. per* Foot.

2. Ditto, with Deal, 1 *s. per Foot*; Workmanſhip, 6 *d. per Foot.*

3. Frontiſpieces of the *Ionick*, *Corinthian*, and *Compoſite* Orders, at about 1 *s.* 6 *d. per Foot*, with Deal, and excluſive of the Capitals and Carving, work 9 *d. per Foot.*

Columns of Wood may be wrought according to any of the Five Orders, excluſive of the Carving of the Capitals at about 10 *d.* or 12 *d. per* Foot ſuperficial Meaſure; the Timber muſt be meaſured and valued by the Tables at the latter End of the Book.

To meaſure the Superficies of a Column obſerve this Rule. Meaſure the Baſe, Shaft and Capital, each of them ſingly; the Dimenſions muſt be taken with a String girt down the Mouldings of the Baſe and Capital; and the Shaft muſt likewiſe be girt with a String, and the Dimenſions thereof being multiplied into the Height, the Product is the Superficial Content.

4. The *Ionick* Capitals, at 5 *s. per Foot.*

5. The *Corinthian* and *Compoſite* Capitals, Carving at 8 *s. per Foot*, Facio work.

ARTICLE XIV.

Of Fencing.

1. FOur-foot Cleft Pale-fencing, with 10 Foot Rails, (when 30 or 40 Rod) at 9 *s. per Rod*; work 2 *s. per Rod*;

Work 2 *s. per* Rod: But if but 2 or 3 Rod, at 10 *s. per* Rod.

9. Five-foot Cleft Pale-Fencing, with 9 Foot Rails, and 3 Rails in a Loop, Work and all Materials, if 30 or 40 Rod, at 12 *s. per* Rod: But if but 2 or 3 Rod, at 13 *s. per* **Rod**; Work 2 *s.* 6 *d. per* Rod.

3. For boarded Fencing, 6 or 7 Foot high, with rough Feather-edg'd Boards, at 20 *s. per* Rod; Work 3 *s.* 6 *d. per* Rod.

4. Ditto, plained and beaded, at 22 *s. per* Rod; Work only 4 *s.* 6 *d. per* Rod.

5. Ditto. The Boards of Oak, at 1 *l.* 10 *s. per* Rod; Work 5 *s. per* Rod.

Palliſadoing.

6. Poſts of Oak, 6 Inches Square, Rails 5 Inches, Pales 3 Inches by 1 and a Quarter, of Oak, at 4 *s. per* Foot running: Pales of Fir, at 3 *s. per* Foot; Work from 16 *d.* to 18 *d.* *per*

per Foot running, the Pales to be mortiſed through the Rails, and about five Foot high above Ground.

Palliſadio Paleing with Oak, the Poſts 6 Inches, Upper Rails 3½ by 4, and the Lower Rail 6 by 3, Pales 3 Inches wide and 1 Inch thick, the Length of the Pales about 4 Foot and a half, Workmanſhip and all Materials 2 *s.* 6 *d.* *per* Foot, lineal Meaſure; the Work about 12 *d.* or 14 *d.* *per* Foot.

7. Ditto, with Square Pales, Inch and half Square, of Oak, 3 *s. per* Foot; of Fir, 2 *s.* 6 *d.* *per* Foot; Work from 16 *d.* to 18 *d.* *per* Foot running.

Palliſadio Gates, the Framed Work with 2 Inch Stuff of Oak, and the Pales ſquare, or flat, at about 9 *d.* or 10 *d.* *per* Foot ſuperficial for Work and all Materials: Work only from 3 *d.* to 4 *d.*

Ditto, of 3 Inch Stuff of Oak, at about 1 *s.* *per* Foot Superficial. The Work from 5 *d.* to 6 *d.* *per* Foot.

Of Park-Paling.

8. Park-Paling with Cleſt Pales, and but one Rail in a Loop, at 14 *s.* *per* Rod; Work, including hewing and riving the Pales, from 2 *s.* 6 *d.* to 3 *s.* *per* Rod.

9. Ditto, two Rails in a Loop, at 16 *s.* *per* Rod; Work at 3 *s.* 6 *d.* *per* *Rod.*

10. Ditto, 3 Rails in a Loop, at 18 *s.* *per Rod*; Work, at 4 *s.* *per* *Rod.*

11. Ditto, with ſawn Pales, from 20 *s.* to 22 or 24 *s.* *per Rod*; Work, from 7 to 8 *s.* *per Rod,* hewing and ſawing included.

Pold-Gates Cleſt.

12. Cleaving, making, ſetting up the Poſts, rnd hanging the Gate, from

4 *s*. to 5 *s*. *per Gate*, for the work only; work and Stuff from 10 to 12 *s*.

13. Ditto, ſawed, with Poſts; making, hanging, and ſetting up, (ſawing included) from 10 to 15 *s*. *per Gate*; work only from 6 *s*. to 6 *s*. 6 *d*. *per Gate*.

14. Gate-Irons, at about 3 *s*. *per Gate*.

ARTICLE XV.

Of Ground-Celling.

PUtting in of *Ground-cell*, at 10 *d*. *per Foot*, of Carpenters work and Stuff; work only from 3 *d*. to 4 *d*. *per Foot*.

ARTICLE XVI.

Of Squares and Coolers for Brewing.

FOr making of Coolers, at about 1 *s. per Foot* ſuperficial, finding Work and all Materials; work only, at *Three-pence Half-penny* per Foot.

2. To make a Square with two-Inch Oaken Plank, to find all Materials, at 1 *s.* 6 *d. per Foot* Cubical.

3. Ditto, with three-Inch Plank of Oak, at 2 *s.* 6 *d. per Foot* Cubical.

4. Ditto, with 3 Inch Double Deals, at 1 *s.* 6 *d. per Foot* Cubical.

Before I cloſe this Section it may not be improper to give a few Examples of caſting up the Contents of Carpenters Work.

EXAMPLE I.

EXAMPLE I.

Suppoſe a *Floor*, or *Partition*, or any other flat Work be 21 Feet and a half Long, and 15 Feet and a half in Breadth. How many Square is in that Dimenſion. Set it down thus:

	Feet.	*Inches.*
The Length	21	6
The Breadth	15	6
The Feet multiplied	105	0
	21	
is	315	
The Feet by Inches	7	6
Ditto	10	6
Inches by Inches		3
Total	333	3

So that the Whole Product is 3 Hundred and Thirty-three Feet three Inches, which to bring into Squares, cut off the two laſt Figures thus, 3|33 and you have 3 Square 33 Feet and 3 Inches the Content required.

EXAMPLE II.

Let a *Floor* or *Partition* be 46 Feet 9 Inches long, and 35 Feet 10 Inches wide or high, and the Content in Squares and Feet required. Set down the Dimenſions thus:

	Feet.	*Inches.*	
The Length	46	9	
The Breadth	35	10	
The Feet Multiplied	230		
	138		
is	1610		
The Feet by Inches	26	3	
Ditto	38	4	
Inches by Inches		7	6
	16|75	2	6

So that the Product is 16 Square 75 Feet (or ¾ of a Square) and 2 Inches and half over, which is ſeldom regarded in Carpenters Work.

Theſe Examples may be ſufficient for the Meaſure of *Floors*, *Boarding*, *Partitions*, &c. only remembring to deduct the *Stairs* and *Chimnies* from *Floors* and *Boarding*, and the *Doors* in *Partitioning*. But as *Roofing* is ſomething more difficult, I ſhall give an Example or two of that.

To Meaſure *Roofing*.

ADmit a Building to be 30 Feet in Breadth and 65 Feet in Length, the Outer Extent of the Walls, and the Content of this Roof required.

If the Roof is made *true Pitch* as it is called, the Length of the Rafter (in this Caſe) need not be meaſured.

But take this for a *General* RULE. That the Length of the Rafter being then ¾ of the Breadth of the Building which is 30 Feet, the Rafter is then 22 Feet 6 Inches long, which double (for both Sides) make 45 Feet, and that multiplied by 65 the Length of the Building, the Product is 29|25, or 29 Square and ¼.

Another way ſomething ſhorter is often practiſed called *flat and half*, (as before-mentioned) The *flat* of the Building being the Length and Breadth multiplied together thus:

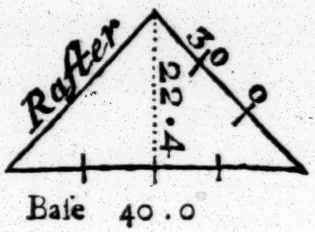
The Length	65	0
Multiplied by the Breadth	30	0
Produces	1950	0
Then adding the half thereof	975	0
You have the Total as before	29|25	0

N. B. When you take the Dimenſion this laſt way, you muſt write to it 1½ ſignifying *flat and half*.

Thus 1½)	65	0
	30	0

To Meaſure Gable-Ends.

THESE are the upright Ends of the *Roof*, whoſe Figure is deſcribed in the Margin. Let the Length of the Bottom or Baſe be 40 Feet, and the Length of the Rafter be 30 Feet, the Perpendicular, or height will be found to be 22 Feet 4 Inches near, then multiplying the whole Perpendicular by half the Baſe, or the whole Baſe by half the Perpendicular, the Product will be 446 Feet 8 Inches the Content required.



Practice	*Feet.*	*Inches.*
The whole Perpendicular	22	4
The half Baſe	20	0
The Feet Multiplied	440	0
Feet by Inches	6	8
Total Product	446	8

Otherwiſe

	Feet.	*Inches.*
Otherwiſe the whole Baſe	40	0
by the half Perpendicular	11	2
The Feet multiplied	40	
	40	
is	440	
40 Feet by 2 Inches is	6	8
Total as before	446	8

So that both ways agree, and the Total is as above. Should there be two or more Gable-Ends alike or of one bigneſs, you muſt multiply the Product by the Number of Times for the whole Content.

To Meaſure Hipp - Rooſs.

THeſe are ſuch as have no *Gable-Ends*, but are ſloped or roof'd all round the Building, and if *true pitch* will be *flat and half* as the other, but if not *true pitch*, take the whole Length of the *Building* by the Length of the two *Rafters* added together, and that is the Dimenſion. Becauſe the two Hipp-Ends will make the ſame Quantity, as if there had been Gables at each End.

Note, If the Building be broader at one End than the other, the Breadth muſt be taken in the Middle, for *Flooring*, *Roofing*, *&c.* or otherwiſe meaſure each End, and adding them together take half the Sum for the Breadth. As for *Example:* If the Building were 30 Feet Broad at one End, and but 28 Feet at the other, thoſe added is 58, whoſe half is 29 Feet, for a *Mean Proportion* or Breadth of the Building.

SECT.

SECT. III.

Of Wainſcoting: Or, JOINERS Work.

WAinſcoting is a Work generally done by the Joiners, and is meaſured by the Yard Square, containing 9 Square Feet; and their Dimenſions are taken in Feet and Inches: Thus, they girt down every Moulding contained between the Cieling and the Floor with a String, which is accounted the Height of the Room, and the Circumference of the Room they take for the Length, deducting the Doors, Windows, and Chimney.

The Seats of Windows, Cheeks, Sofites, Linings, *&c.* are all taken by themſelves, alſo Doors and Window-ſhutters of whole Deal, are allowed

Work and Half Work, or double Work, if of 2 Inch Stuff, in regard to their being work'd on both Sides, as I before obſerved under the 10th *Article* of the foregoing *Section.*

Of Taking Dimenſions.

I ſhall give you an Example of one *Room* of Wainſcoting, which will ſuffice for the Underſtanding of the Meaſurement of many *Rooms*: or, a whole HOUSE or HOUSES.

Let the ſeveral Sides be meaſured and ſet down as under:

	Feet.	*Inches.*
The North Side	16	5
East Side	14	3
South Side	16	4
Weſt Side	14	4
The Juttings or Breaks of the Chimney.	3	8
The *Round* of the *Room* is	65	0

Which being Part of a *Dimenſion,* ſet it down and all the reſt as follows, which will be the *Form* of your *Meaſuring Book,* (*viz.*)

	Feet.	Inch.	Product.	
Round of the *Room*	65	0	682	6
Girt of the *Room* or Height	10	6		
Half Work of Shutters 2 times for 2 Windows	2) 6	0	18	0
	1	6		
Linings to Ditto two times	2) 18	0	30	0
	0	10		
Linings to the Door	16	0	10	8
	0	8		
Half Work of the Door.	6	6		
	1	6	9	9
Total			750	11
Deduct the Chimney.	4	6	18	0
	4	0		
Total of Feet			732	11

Which being divided by 9 will give 81 Yards 3 Feet 11 Inches for the Content of this *Room,* and ſo of any other.

The

The P R I C E.

1. Plain Square Wainſcoting with Deal; at 2 *s.* 6 *d. per* Yard; Work only from 9 *d.* to 10 *d. per* Yard.

2. Deal Wainſcoting with a Quarter round and plain Pannels, 3 *s.* 6 *d. per* Yard; Work only 1 *s.* 2 *d. per* Yard.

3. Deal Wainſcoting with a Quarter round and raiſed Pannels 4 *s.* 6 *d. per* Yard; Work only 1 *s.* 4 *d. per* Yard.

4. Ditto, with *Norway* Oak, the Work Quarter round and raiſed Pannel, the Framing Inch and a Quarter, and the Pannels 3 Quarters of an Inch, or 1 Inch thick, from 5 *s.* to 5 *s.* 6 *d. per* Yard; Work only at 2 *s. per* Yard.

Note, The ſame Price will do for any other Sort of Moulding wrought on the framed Work of the Wainſcot inſtead of the Quarter round.

5. Ordinary *Bolexion* Wainſcoting with Deal, Work and Stuff at 4 *s. per* Yard; Work only at 1 *s.* 6 *d. per* Yard.

6. Large *Bolexion* Wainſcoting with *Dantzick* Stuff, 6 *s. per* Yard; Work only 2 *s. per* Yard.

7. All Mouldings whatever that are not wrought with common Plaines, but are worked by Hand; as Impoſt Mouldings, Baſes, Architraves, Pilaſters, Columns, Corniſhes, *&c.* are to be meaſured in ſuperficial Feet, and to allow for the ſame from 1 *s.* to 1 *s.* 6 *d. per* Foot, Work and all Materials; Work only from 6 *d.* to 9 *d. per* Foot, according to the Goodneſs of the Work.

Except there is an Agreement to meaſure the Mouldings at the Price of the Wainſcot, as is ſometimes done.

8. *Dentil Corniſhes* have more Labour and Materials beſtowed on them, and are worth for every Foot in Length 1 *d.* ½ *per* Inch girt, and for Workmanſhip 1 *d. per* Inch girt; or you may account them at 18 *d. per* Foot ſuperficial Meaſure; and for the Work only 1 *s. per* Foot ſuperficial.

SECT. IV.

I Shall in this Section explain all that is neceſſary in the Performance of *Brick* Buildings, not only in the Method of Meaſuring, but alſo the Prices of the ſeveral Sorts of Work done by *Bricklayers*. But before this it will be proper to conſider the *Digging* out of the Cellers or Foundations, 'till which the *Brick-work* cannot be done.

DIGGING then is a Work performed by the cubic or ſolid Yard containing 27 Feet, or 3 Feet each Way in *Length*, *Breadth* and *Depth*.

In taking *Dimenſions* they are not ſo curious as in other *Works*, They ſeldom meaſuring nearer than to a *Quarter* of a *Foot*.

Suppoſe then a *Foundation* of HOUSE is dug out, 32 Feet 6 Inches long, 18 Feet 3 Inches wide, and 7 Feet 6 Inches deep, How many Yards is continued in that Cavity.

	Feet.	*Inches.*		
The Length	32	6		
The Beadth	18	3		
	256			
	32			
Feet Multiplied	576	0		
Feet by Inches	9	0		
Ditto	8	0		
Inches by Inches		1	6	
	593	1	6	Superf. Cont.
	7	6	0	the Depth.
Feet Multiplied	4151	0		
Feet by Inches	0	7		
Feet by Parts	0	3	6	
Feet by Inches	296	6		
Inches by Inches	0	0	6	
Inches by Parts	0	0	3	
	4448	5	3	Solid Content.

So that the ſolid Content of ſuch a *Foundation* is 4448 Feet, which to bring into Yards, divide by 27 (the ſolid Feet in a Yard) thus:

27) 4448 (164 *Solid Yards.*
27
―――
174
162
―――
128
108
―――
Solid Feet 20 *Remains.*

Which is near three Quarters of a Yard more. As to the Inches and Parts they are always rejected.

The PRICE

Will be variable according to the different Soil, as, Clay, Gravel, Flints, *&c.* in which they are to be dug, but is generally from 3 *d.* ½ to 5 *d. per* Yard.

Another Obſervation muſt be made here, that as in *Page* 2. it was premiſed,

miſed, that *the Charge of Carrying the Materials* TO *the Work muſt be added to the Eſtimation*; ſo alſo here, the Charge of Carrying the Earth and other Rubbiſh FROM the Work muſt be remembred.

Of BRICKLAYERS *WORK.*

THE Principal Work in a Building, done by Bricklayers, are, Walling, Tileling, Rough-Caſting, *&c.* To each of which I ſhall ſpeak to in their Order, and firſt,

Of Brick-Walls.

The Particulars to be obſerved in meaſuring of *Brickwork*, are, firſt, that it is meaſured by the Rod of 16 Feet and a half Square, whoſe Product is 272 Feet and a Quarter, the Content of one Rod of Brickwork, at the

Standard Thickneſs of one Brick and a half, and if not ſo, it muſt be reduc'd thereto by the following *RULE*.

Multiply the Number of Feet contained in the ſuperficial Content of the *Wall* by the Number of *Half* Bricks, that the *Wall* is in Thickneſs, which Product always divide by 3, (the Number of *Half* Bricks in the Standard Thickneſs,) and the Quotient is the true Content required.

EXAMPLE I.

Let a *Wall*, or the Contents of ſeveral *Walls*, be 255 Feet, and 2 Bricks and a half thick, what is it reduc'd?

```
                               255  Superficial Content.
              Multiplied by      5  the No. of half Bricks.
                             -----
Div. by the No. of half     3)1275(425 Feet reduc'd.
Bricks in the Standard.       12
                             ----
                               ..7
                                 6
                              ----
                                15
                                15
                              ----
```

So that the Anſwer is 425 Feet of reduc'd Brickwork.

EXAM-

EXAMPLE II.

Let the Superficial Content be 357 Feet, and 3 Bricks and a half thick, what is it reduc'd?

357 Superficial Content.
7 half Bricks.

Stand. Thickneſs 3)2499(833 feet Reduc'd.
24
··9
·9

EXAMPLE III.

If the ***Wall*** be but one Brick thick, the RULE is ſtill the ſame, thus:

924 Superficial Content.
Multiply by 2 No. of half Bricks.

Stand. Thickneſs 3)1848(616 feet Reduc'd.
18
··4
3
18
18

Theſe Examples might ſuffice in even Numbers of Feet, but as it often happens there is Inches in the Superficial Content, as alſo in the Remainder. I ſhall give a few Inſtances of them.

EXAMPLE IV.

Let the Superficial Content be 539 Feet 5 Inches, and the Thickneſs, 4 Bricks and half, what is it reduc'd?

```
     Feet. Inches.
      539    5   Superficial Content.
        9       No. of half Bricks.
    ———————— Feet.  Inches.
   3)4854   9(1618   3  Content Reduc'd.
     3
   ————
     18
   ————
     ..5
       3
   ————
      24
      24
   ————
     ..9
```

EXAMPLE V.

Again, Let the Superficial Content be 137 Feet 9 Inches, the Thickneſs 2 Bricks and half, what is it reduc'd?

Feet. Inches.
137 9 Superficial Content.
5 No. of half Bricks.
Feet. Inches.
3)688 9(229 7
6
8
6
28
27
And 1 Remains,

Which is $\frac{1}{3}$ of a Foot, or 4 Inches, and the $\frac{1}{3}$ of 9 Inches added will make the Whole 229 Feet 7 Inches reduc'd as above.

Note, *When the Thickneſs is juſt one Brick and half, the Content is ready reduced.*

And to bring theſe Reduc'd Feet into Rods take this *RULE.*

Multiply the Product by 16, (the Square Quarters in a Foot) and divide the Product thereof by 4353 (the Square Quarters in a Rod) and the Quotient is the Number of Rods, and the Remains divided by 16 gives the Feet contained therein.

For Example:

1618 Superfic. Content.
Multiplied by 16 the Square Quarters in a Foot.

9708
1618

Square Quart. in a Rod 4353 | 25888 | 5 Rod.
21765

Quarters in a Foot 16)4123(257 Feet.
32

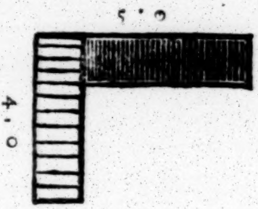
92
80

123
112

11

So that 1618 Superficial Reduc'd Feet is 5 Rod, 257 Feet of Brickwork, and the like of any other Sum.

Obſerve the ſeveral Thickneſſes of the Walls, and that you make every Deduction out of its proper Thickneſs. Likewiſe when you meaſure two Walls that conſtitute an Angle, that the Length of one be taken to the Inſide, and the other to the Outſide of the Wall, as in the Figure thus:

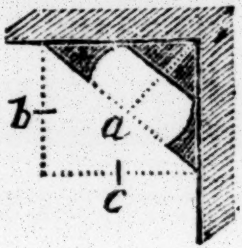


Meaſure Chimneys as a ſolid Wall, and deduct the Vacancy between the Jaumbs one way and the Mantle and Floor the other way. The Funnels (in regard to the Trouble of them, and Pargeting the Inſide,) are allowed as ſolid.

Square Chimneys are as eaſy to meaſure as a Wall, but the Method for *Angle* Chimneys being not ſo well known, here is an Example or two of them, which will be ſufficient for all Caſes that can happen.

EXAMPLE I.

Fig I.



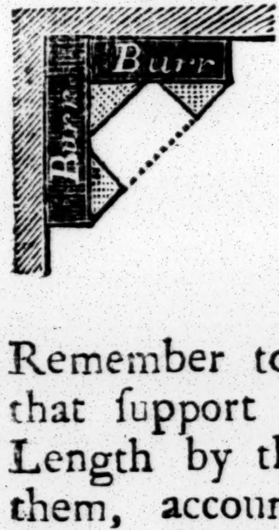
Let the Form of them be as in Fig. I. which is a Chimney ſtanding in a ſquare Corner, and equally each way from the Corner, in this Caſe where the Breaſt or Front is 6 Feet wide, take half the ſame, as at *a*, being 3 Feet, multiplyed by the Height of the Story. As, Suppoſe 9 Feet and half, then your Dimenſion will ſtand thus:

Feet.	*Inches.*	
9	6	the Height of the Story.
3	0	Half the Breaſt.
27		
1	6	
28	6	Superficial Content.

Then conſider how many *half Bricks* thick are contained in the ſaid half Breaſt, (9 Inches being the Length of a Brick) and you will find 8, or 4

Bricks thick, then working as before taught, you will find the reduc'd Content 76 Feet, from which muſt be deducted the Vacancy as in ſquare Chimneys. If they do not ſtand equally from the Corner, or the Corner be not ſquare, the uſual Way is to lay out the Angle parallel to the Walls as *b* and *c*, and take one *whole* Line, multiplied by the Height of the Story, and the *half* of the other Line conſidered for the Thickneſs gives the Content. Sometimes there are *Burrs* for the under Funnels on one or both Sides, as in *Fig.* II. which are meaſured in their reſpective Thickneſſes as a ſquare Wall: Alſo, Remember to meaſure the Trimmers that ſupport the Hearths taking the Length by the Girt of the *Arching* of them, accounting them *half a Brick* thick; ſo that if they are 6 Feet long, and 1 Foot 6 Inches girt, there is 3 Feet of reduced Brickwork therein.

Fig. II.



Before I proceed to the Prices of Brickwork, I think it will not be improper to inſert the following Obſervations:

1. Of Laying Bricks, which is a Thing of no ſmall Conſequence in a Building; for the well working and bonding of Brickwork (or, as ſome Workmen call it, Breaking of Joints) conduces very much to its Strength; therefore let Care be taken that Bricks be not laid Joint on Joint in the Middle of Walls, as ſeldom as may be, but let there be good Bond made there as well as on the Outſides.

2. Let me commend to your Care, to be ſure to procure good ſtrong *Mortar*; the Way to make it according to *Vitruvius*, is to put three Parts of dug or Pit Sand to one of Lime; the uſual Way in *London* is to put three Pecks of Sand to one Buſhel of Lime. In *Suſſex* they put one Buſhel and a half of Sand to one of Lime, but the Lime is made of Stone; but if it be Chalk Lime they put $2\frac{1}{4}$ Buſhels of Sand to one of Lime.

From all the various Proportions of Lime and Sand, abovementioned, I think it reaſonable to infer, that the Proportion of *Lime* to *Sand* in making of *Mortar*, ought to be various, according to the Goodneſs, or Badneſs, of theſe Materials; and therefore is rather to be regulated, by the Judgment of Experienced Workmen in each particular *Country*, than by any ſtated Proportions. I ſhall therefore proceed to ſay ſomething of the Method of making *Mortar*. It is the beſt Way not to uſe *Mortar* as ſoon as it is made; (nor in making it) to make the Lime run before it is mixed with the Sand, (as ſome will do) but rather to take the Sand and throw it on the Lime whilſt it is in Stones before it is run, and ſo to mix it together, and then wet it, by which Means it will be the ſtronger, and when it has lain a while made before it is uſed, will not be ſo ſubject to blow and bliſter.

3. If Bricks are laid in Winter, let them be both kept and laid as dry as poſſible; but if in the Summer, wet

hm,

them, either by dipping them in Water as you lay them, or throw Water into every Courſe as you lay them: for thereby they will the better unite with the Mortar, than they would, if laid dry.

4. If Bricks are laid in the Summer-Time, be ſure to cover the Walls to prevent their drying too faſt; for if the Mortar dry too haſtily, it doth not cement ſo firmly to the Bricks as when it dries gradually.

5. If Bricks are laid in the Winter, alſo be ſure to cover them very well, to protect them from Rain, Snow, or Froſt, which laſt is a mortal Enemy to all Mortar, eſpecially to thoſe as have taken wet but juſt before the Froſt aſſaults it.

In *Building* with *Bricks*, there are ſeveral Things to be conſider'd: As,

Firſt, That all Walls ought to be perpendicular to the Ground-work; for the right Angle is the true Cauſe of all Stability, both in artificial and natural Poſition, a Man ſtanding firmeſt when moſt upright.

Secondly, That the maſſieſt and heavieſt Materials be the loweſt, as fitter to bear than to be born.

Thirdly, That the Walls as they riſe, diminiſh proportionably in Thickneſs, for Eaſe both of Weight and Expence.

Fourthly, That certain Courſes or Ledges of more Strength than the reſt, be interlaid, like Bones, to ſuſtain the Fabrick from total Ruin, if the Under-Parts ſhould decay.

Fifthly, That the Angles be firmly bound, which are the Nerves of the whole Edifice; and therefore are commonly fortified by the *Italians*, in their Brick-Buildings, on each Side of the Corners, with well ſquared Stones, yielding both Strength and Grace.

Sixthly, In carrying up the Walls of a Building, not to make any Wall above 3 Feet high, before you work up the next adjoining Wall, that ſo they may be joined together, and make firm Bond in the Work: For it is an ill Cuſtom among ſome *Bricklayers*, to carry, or work up, a whole Story of the Party-Walls, before they work up the

Fronts, or other Walls adjoining, that ſhould be bonded, or worked up together, which cauſes Cracks and Settlings in the Whole.

The PRICE.

1. *Brick-Walls* are from 6 *l.* to 6 *l.* 10 *s. per Rod*; Work from 18 *s.* to 23 *s. per Rod.*

2. *Brick-Fronts*, excluding Arches, Facio's, and Corniſhes, are from 7 *l.* to 8 or 9 *l. per Rod*; Work only from 18 *s.* to 1 *l.* or 1 *l.* 5 *s. per Rod.*

3. One Rod of *Brick-work*, at the Standard Thickneſs will require 4500 of Bricks, 1 Hundred and a Quarter of Lime, and two Load and a half of Sand.

But whereas there is a wide Difference in the Value of one Rod of Brick-work, according to the various Cuſtoms of *Countries*, by Workmens Wages, and in the Prices of Materials, I ſhall here ſubjoin a Table, which by the Directions here given, will infallibly ſhew the Value of one Rod of Brick-work in any Part of *England*, according to the Statute Thickneſs of one Brick and a half, allowing 4500 of Bricks to a Rod, 22 *s.* for Mortar, and 24 *s.* for Workmanſhip, and according to eighteen different Prices of Bricks *per* Thouſand.

The TABLE.

	s.		*l.*	*s.*	*d.*
The Value of one Rod of Brickwork, allowing 22 *s.* for Mortar, 24 *s.* for Work, and Bricks 4500, at	8	*per* Thouſ. is	4	2	0
	9		4	6	6
	10		4	11	0
	11		4	15	6
	12		5	0	0
	13		5	4	6
	14		5	9	0
	15		5	13	6
	16		5	18	0
	17		6	2	6
	18		6	7	0
	19		6	11	6
	20		6	16	0
	21		7	0	6
	22		7	5	0
	23		7	9	6
	24		7	14	0
	25		7	18	6

The

The Uſe of the Table.

In order to know the Price of one Rod of Brickwork any where, you muſt firſt inquire, at what Rate you can have your Bricks laid in *per* Thouſand; and then if the Price of the Workmanſhip, and Mortar, be the ſame as abovementioned, you have no more to do, than to ſeek the Price you can have the Bricks at *per* Thouſand in the Table, and right againſt it, you have the Value of one Rod of Brickwork, as required.

But if there ſhould be any Difference in the Work, as there will in ſome Countries, from the various Charge of Workmens Wages, you may ſtill know the Value of a Rod by this *Table*, by obſerving that a Trowel-man and Labourer, although but ſlow, can perform one Rod of rough Work in five Days. One Example will make it plain.

EXAMPLE.

What is the Value of one Rod of Brickwork at the Statute Thickneſs of one

one Brick and a half, allowing 22 *s. for Mortar,* 16 *s.* per *Thouſand for Bricks,* 2 s. 2 d. per *Day for a Bricklayer, and* 16 d. per *Day for a Labourer?*

The RULE.

As the Price of the Mortar is the ſame in the Queſtion as the Table is calculated at, you have nothing elſe to do, but to caſt up what the Work comes to, and either add to, or ſubſtract the Difference from the Price of the *Work* in the *Table,* and it will give you the Price or Value of one Rod of *Brick-work* as required.

PRACTICE.

	s.	d.
5 Days of a *Bricklayer* at 2 *s.* 6 *d. per* Day ——	10	10
5 Days of a *Labourer* at 1 *s.* 4 *d. per* Day. ——	6	8
The Sum	17	6

Which 17 *s.* 6 *d.* you muſt ſubſtract from the Price of the *Work* allowed in the Table, *viz.* 24 *s.* and there remains 6 *s.*

6 *s.* 6 *d.* then ſeek the Value of one Rod of *Brickwork* in the Table at 16 *s. per* Thouſand for Bricks, and right againſt it you will find 5 *l.* 18 *s.* 0 *d.* from which ſubſtract the Difference in the Workmanſhip, *viz.* 6 *s.* 6 *d.* and there remains 5 *l.* 11 *s.* 6 *d.* which is the Price ſought for as required.

But further, to know the Value of one Rod of *Brickwork,* at the Statute Thickneſs of a Brick and a half, let the Price of the Materials, Workmens Wages, or Time allowed for the doing of it be what it will.

EXAMPLE.

What is the Value of one Rod of Brickwork at the Statute Thickneſs of a Brick and half, allowing the Workmen 6 Days for the doing it, Bricks at 20 s. per *Thouſand, and* 4500 *Bricks,* 32 *Buſhels of Lime, at* 6 *d.* per Buſhel; 2 *Load of Sand, at* 3 *s.* per *Load, and the Bricklayers Work at* 3 *s.* per *Day, and the Labourer's Work at* 1 *s.* 6 *d.* per *Day?*

one Brick and a half, allowing 22 *s. for Mortar,* 16 *s.* per *Thouſand for Bricks,* 2 s. 2d. per *Day for a Bricklayer, and* 16 d. per *Day for a Labourer?*

The RULE.

As the Price of the Mortar is the ſame in the Queſtion as the Table is calculated at, you have nothing elſe to do, but to caſt up what the Work comes to, and either add to, or ſubſtract the Difference from the Price of the *Work* in the *Table*, and it will give you the Price or Value of one Rod of *Brick-work* as required.

PRACTICE.

	s.	*d.*
5 Days of a *Bricklayer* at 2 *s.* 6 *d. per* Day ——	10	10
5 Days of a *Labourer* at 1 *s.* 4 *d. per* Day. ——	6	8
The Sum	17	6

Which 17 *s.* 6 *d.* you muſt ſubſtract from the Price of the *Work* allowed in the Table, *viz.* 24 *s.* and there remains 6 *s.*

6 *s.* 6 *d.* then ſeek the Value of one Rod of *Brickwork* in the Table at 16 *s.* *per* Thouſand for Bricks, and right againſt it you will find 5 *l.* 18 *s.* 0 *d.* from which ſubſtract the Difference in the Workmanſhip, *viz.* 6 *s.* 6 *d.* and there remains 5 *l.* 11 *s.* 6 *d.* which is the Price ſought for as required.

But further, to know the Value of one Rod of *Brickwork,* at the Statute Thickneſs of a Brick and a half, let the Price of the Materials, Workmens Wages, or Time allowed for the doing of it be what it will.

EXAMPLE.

What is the Value of one Rod of Brickwork at the Statute Thickneſs of a Brick and half, allowing the Workmen 6 *Days for the doing it, Bricks at* 20 s. per *Thouſand, and* 4500 *Bricks,* 32 *Buſhels of Lime, at* 6 *d.* per Buſhel; 2 *Load of Sand, at* 3 *s.* per *Load, and the Bricklayers Work at* 3 *s.* per *Day, and the Labourer's Work at* 1 *s.* 6 *d.* per *Day?*

DEMONSTRATION.

	l.	*s.*	*d.*
4000 Bricks at 20 *s. per* Thouſ.	4	0	0
500 Bricks ditto.	0	10	0
32 Buſhels of Lime at 6*d. per* B.	0	16	0
2 Load ½ of Sand at 3*s. per* Load.	0	7	6
6 Days of a Trowelman at 3 *s. per* Day.	0	18	0
6 Days of a Labourer at 1 *s.* 6 *d. per* Day.	0	9	0
The Price required	7	0	6

Rubb'd Arches of any Sort from 18 *d.* to 20 *d. per Foot*; Work only from 10 *d.* to 1 *s. per Foot.*

5. *Plain Facio's* rubb'd at 13 *d. per Foot*; Work only 8 *d. per Foot.*

6. *Brick-Corniſhes,* from 4 *s.* to 5 *s. per Foot*; Work from 3 *s.* to 3 *s.* 6 *d. per Foot* Lineal Meaſure.

7. *Under-Pining,* at 5 *d. per Foot* running Meaſure; Work only from 1 *d.* to 1 *d.* ½ *per Foot* Lineal Meaſure.

8. *Digging and bricking of new Wells,* from 7 *s.* 6 *d.* to 8 *s. per Foot* in Depth

only; Work from 2 *s.* 6 *d.* to 3 *s.* 6 *d.* *per Foot.*

9. *Chimnies* are ſometimes done by the Rod, as other *Brickwork*; and ſometimes by the Hearth: When they are done by the Rod, they are worth from 6 *l.* to 6 *l.* 10 *s.* *per Rod*; the Work from 18 *s.* to 20 *s.* *per Rod.*

10. Ditto. *By the Hearth*, from 55 *s.* to 60 or 65 *s.* *per Hearth*; the Work from 15 *s.* to 25 *s.* *per Hearth.*

Note, The Scaffolding to be conſidered.

Here it may not be amiſs to obſerve,

1. That no Timbers of the Floors be laid within 12 Inches of the Foreſide of the Chimney-Jaumbs.

2. Let all Joiſts on the Back of any Chimney be laid with a Trimmer, at 6 Inches Diſtance from the Back.

3. Let no Timber be laid within the Funnel of any Chimney, for without theſe Cautions the Houſe may be in Danger of FIRE which ought always to be remembred, and (if poſſible) guarded againſt.

ARTICLE II.

Of Tileing.

Tileing is meaſured by the Square, as Carpenters meaſure their Roofs: You muſt obſerve in taking Dimenſions of Tileing, that you meaſure the whole Length, that is, as far as the Tiles are laid for the Length, and take from the Eaves to the Ridge, for your Breadth or Depth, and thereby you will find the true Content of the Tileing required. When Hips and Vallies happen in a Roof, every Foot in Length muſt be added to the Meaſure, as Square Feet.

The PRICE.

1. Plain Tileing, if to an 8 Inch Gauge, 22 *s.* if to a 7 Inch Gauge, 26 *s.* *per Square*; and at a 6 Inch Gauge, 28 *s.* *per Square*; Work only from 3 *s.* 6 *d.* to 4 *s.* *per Square.*

2. Ditto. To find all Materials excluſive of Tiles 10 *s. per Square.*

3. Ripping old Tileing according to the Goodneſs of the old Tiles, from 14*s.* to 18 *s. per Square.*

4. Pantileing, when pointed, Work only at 1 *s.* 8 *d. per Square*; Work and all Materials, common Pan-tiles, at 20*s. per Square.*

5. Ditto, without pointing, at 18 *s. per Square.*

6. Ditto, with old Pantiles, at 10 *s. per Square.*

7. *Dutch* glazed Ditto, at 1 *l.* 15 *s. per Square.*

8. *Engliſh* Ditto, at 1 *l.* 10 *s. per Square.*

9. The Materials required to a Square of Plain Tileing, at a

6 Inch Gauge —— 760
7 Inch Gauge —— 690
8 Inch Gauge —— 600
Pan-Tiles ———— 170
} Tiles to a Square.

There is alſo required to a Square of Plain Tileing, one Peck of Tile-Pins, 2 Buſhels of Lime, 5 Buſhels of Sand, 1 Bundle of Laths, and between 5 and 600 of Nails: Commonly 1 Square is accounted a Day's Work for a Trowel-Man and Labourer.

ARTICLE III.

Of Rough-Caſting, Plaiſtering, *&c.*

ROugh-Caſting, Plaiſtering, Cielings, *&c.* are done by the Yard Square, and the Dimenſions are taken in Feet and Inches, as the Joiners Work.

The Principal Things to be obſerved in taking Dimenſions and meaſuring the ſame, are as follows:

1. To make Deductions for Chimneys, Windows, and Doors.

2. To make no Deductions for rendering upon Brick work, for Doors and Windows, by reaſon the Jaumbs and Heads generally exceeds the Vacancies.

3. That ſuch Summers and Girders as lie below a Cieling, be deducted, if the Workmen find Materials, otherwiſe not.

4. If the Workmen find Materials, for rendering between the Quarters, one fifth Part muſt be deducted for the Quarters, Braces, *&c.* but if the Work only is found, you muſt meaſure the Whole as whole Work, for the Workmen could have performed the whole much ſooner if there had been no Quarters there.

5. In meaſuring Whiting and Colouring between Quartering, allow a fourth Part extraordinary for the Returns of the Quarters, or take the Length with a String, and ſo girt the Quarter, which is the trueſt way.

The PRICE.

Pargetting or *Plaiſtering* is of divers Kinds, as,

1. With Lime and Hair Mortar upon bare Walls, Lathing included, at 12 *d. per Yard*; Work only from 5 *d.* to 6 *d. per Yard.*

2. Common Rough-Caſting, Work and all Materials, from 1 *s.* to 1 *s.* 4 *d. per Yard*; Work only from 5 *d.* to 6 *d. per Yard.*

3. Rough Caſting with Stone-Mortar, and raiſed Pannels, from 1 *s.* 6 *d.* to 2 *s.* 6 *d. per Yard*; Work only from 6 *d.* to 8 *d. per Yard.*

4. Rough-Caſting, with Stone-Mortar, done in Imitation of Stone-work, from 2 *s.* 6 *d.* to 3 *s. per Yard*; Work only from 6 *d.* to 8 *d. per Yard.*

5. Plaiſtering upon Brick-work, with finiſhing Mortar, in Imitation of Stone-work, from 18 *d.* to 2 *s. per* Yard; Work only 6 *d. per* Yard.

6. All plain Mouldings, if ſtrait, at 6 *d. per Foot* ſuperficial, and if circular at 9 *d. per Foot* ſuperficial. Enriched ſtrait Mouldings, at 1 *s. per Foot*; Circular, at 1 *s.* 6 *d. per Foot.*

In all theſe Works the Scaffolding is to be conſidered.

Note. The Quantity of Lime and fine Sand for finiſhing Mortar muſt be equal.

7. For Lathing and Plaiſtering of Inſide Work, with Materials 10 *d. per* Yard; Work only 4 *d. per* Yard.

8. Rendering on *Brick-work*, Work and Hair-Mortar, from 4 *d.* to 6 *d. per* Yard; Work only 2 *d. per* Yard.

9. For Lathing and Plaiſtering of common Cielings, at 1 *s. per* Yard; Work only 4 *d. per* Yard.

10. Ditto. Fine floated Cielings, at 2 *s. per* Yard; Work only, at 1 *s. per* Yard.

11. For Lathing and Plaiſtering of Walls with Lime on both Sides; Work only 3 *d. per* Yard.

12. For White-waſhing with Whitening and Size, work and all Materials, at 2 *d. per* Yard.

Note. One Bundle of Oaken Sap-Lathes, is ſufficient for 7 Yards of Plaiſtering; and 1 Bundle of Heart-Lathes for 6 Yards.

SECT. V.

Of MASONS *WORK.*

MASONS meaſure their Work either *ſuperficial* or *ſolid*, and ſometimes both.

The Dimenſions are taken in Feet, Inches, and the twelfth Parts of an Inch: The *Solids* are Blocks of Marble, or any Kind of Stone, Columns, Corniſhes, *&c.* The *Superficies* are Pavements, Slabs, Chimney-Pieces, and the like. It is to be obſerved, that Maſons firſt meaſure the Cube of the Stone, and then ſuperficial plain Work, alſo ſuperficial moulded Work, (if any) as follows:

Firſt, They account all ſuch Stones

as are above 2 Inches thick, at ſo much *per Foot* ſolid Meaſure; and for the Work they meaſure the Superficies of the Stone, but then they meaſure no more of the Stone than what appears without the Wall. Their Dimenſions are taken with a String, which they preſs into all the Mouldings by bringing it a-croſs them.

But their *Method* being not ſo well known, it may be proper to give an Example of one Chimney-Peice, as a Guide to all others.

Firſt then, take the *Length* of the *Mantle*, or Head-Stone, and the *Slabb* (whoſe Extent is generally the ſame) for one Sum of the Dimenſion, and the *Breadth* of *both* added together, with an Inch or more for the under Edge of the *Mantle*, and half an Inch (or whatever it is) for the upper Edge, which being all added is the other Sum of the Dimenſion.

2. Take the *Length* of the *Jaumbs*, or Sides, allowing an Inch longer than is ſeen, (they going in below the Slabb) for one Sum and the *Breadth* of one

(girting all that is ſeen) and double it for the Sum of the ſecond Dimenſion.

3. If there are *Slips* and *Noſeings* to ditto, meaſure the *Length* by all the Girt that is ſeen in *Breadth*, and either double the Breadth, or make the Dimenſion 2)times.

4. *Fire Stone Hearths* and *Coveing Stones* muſt be caſt up by themſelves, and are meaſured all that appears in Sight.

Example of the Dimenſions.

Of a Marble *Chimney Piece.*

	Feet.	*Inch.*	*P.*	*Products.*		
Length of Mantle and Slabb	4	10	0	13	10	9
Breadth of Ditto.	2	10	6			
Length of Jaumbs	3	9	0	6	10	6
Breadth of both Ditto added	1	10	0			
Length of Slips and Noſeings	3	11	0	5	10	6
Breadth of both Ditto	1	6	0			
Total in Feet, Inches, and Parts				26	7	9
Fire Stone to Ditto.						
Length of Coveings	4	0	0	16	0	0
Length of one therefore times 2)	2	0	0			
Length of the Hearth	3	2	0	6	7	0
Breadth of Ditto	2	1	0			
Total of Feet and Inches				22	7	0

Here you have the whole Operation at one View of a Chimney-piece meaſured, which as it is of *Marble* (a VALUABLE Stone) is taken in Feet, Inches and the twelfth Parts of an Inch, and muſt be *always carefully ſet down and caſt up*; each of theſe *Parts* of an Inch being worth 3 Farthings in ſome *Marble*, and therefore would be very unjuſt to reject the leaſt Number of them, but to come to the Quantity, in the Example before us, you have in this Chimney-Piece, 26 Feet, 7 Inches and 9 Parts (or three Quarters of an Inch) of *Marble*. And of *Fire-ſtone*, 22 Feet, 7 Inches, and ſo you may caſt up any other whatever.

The PRICES.

1. Black and White Veined *Italian* Marble, at 20 *s. per Foot* Cube.
2. Superficial plain Work on Ditto, at 3 *s. per Foot.*
3. Superficial moulded Work on Ditto, at 5 *s. per Foot.*
4. Slabbs of Ditto, in Chimney-Pieces, at 5 *s. per Foot.*

5. Purple Marble in Slabbs, at 8 *s. per Foot.*

6. Dove Marble, at 6 *s. per Foot* ſuperficial.

7. Fire-ſtone Hearths and Coveings, at 1 *s. per Foot* ſuperficial.

8. *Portland* Blocks, at 2 *s.* 3 *d. per Foot* Cube, out of the Maſon's Shop.

9. Superficial Plain Work on Ditto, at 1 *s. per Foot* ſuperficial.

10. Superficial moulded Work on Ditto, at 14 *d. per Foot.*

11. *Portland* Slabbs in Chimney-Pieces, at 18 *d. per Foot*, Inch and half thick.

12. Ditto, if 2 Inches thick, at 2 *s. per Foot.*

13. *Portland* Paving in ſtrait Courſes, at 18 *d. per Foot.*

14. Ditto, Octagon, and black Dots, at 2 *s. per Foot.*

15. Black and white Marble Squares, at 2 *s.* 6 *d. per Foot* ſuperficial.

16. *Purbeck* Paving, at 7 *d. per Foot.*

17. *Portland* Aſtragal Steps, at 3 *s.* 6 *d. per Foot* running Meaſure.

18. Plain Ditto, at 3 *s. per Foot* running Meaſure.

19. *Purbeck* Steps, at 2 *s. per Foot* running Meaſure.

20. *Portland* Copeing for common Houſes, at 18 *d. per Foot* running Meaſure; being about 1 Foot wide, and 3 Inches one Edge, and one and an half the other in Thickneſs.

21. But when larger, to be cubed firſt, and then meaſured ſuperficial plain Work.

22. So alſo *Portland* Curbes for Ironwork, &c. muſt be cubed firſt, and then meaſured ſuperficial plain Work.

23. Alſo the Holes cut in the ſame for Iron, at 2 *d.* each.

24. Baſes of Columns, Architraves, Frizes, Corniſhes, &c. of Marble, are at 5 *s. per Foot* ſuperficial Meaſure for the Work only.

25. Ditto, on *Portland* Stone at 14 *d.* or 18 *d. per Foot* Facio Work, or meaſured on the Face, the Stone to be valued at *per Foot* cubical as ſet down at No. 8.

26. The Shafts of Columns and Pilaſters fluted, at 18 *d. per Foot* Facio Work, on *Portland* Stone.

27. Carving the Capitals for the *Corinthian* and *Compoſite* Orders, at *per Foot* Facio Work, about 6 or 7 *s.* excluſive of the Stone.

N. B. Theſe Prices (eſpecially in the Marble) muſt ſometimes be augmented, according to the Beauty and Goodneſs of the Stone.

SECT. VI.

Of GLASIERS *WORK.*

GLaſiers meaſure their Work by the ſuperficial Foot. Their Dimenſions are taken in Feet, and Inches, but as *Glaſs* is as dear as moſt other Materials uſed in *Building*, their Manner of Meaſurement differs from the former, for they take the Dimenſions with a two Foot or three Foot *Sliding Rule*, divided decimally (as it is called) that is, each Foot into 100 Parts, ſo that three Quarters or 9 Inches is 75, half a Foot or 6 Inches is 50, and a Quarter or 3 Inches is 25 of theſe Parts.

Therefore admit a *Pane* or *Light* of leaded Glaſs be 3 Feet 6 Inches long, and 1 Foot 6 Inches wide; they ſet them down (as on their *Rules*) 350, by 150, therefore the Meaſurer of *Glaſier's* Work ſhould underſtand *Decimal Arithmetick*, allowing the Feet as Integers, and the Parts Decimals, for Example, the aforeſaid Pane or Light is thus:

EXAMPLE I.

By × Multiplication.			By Decimals.	
Length	3	6	Length	3.50
Breadth	1	6	Breadth	1.50
	3	6		17500
	1	6		350
Total	5	3		5.2500

So that the whole Content of one *Light* is 5 Feet and a Quarter, or 25 Parts of a 100.

Should there be ſeveral *Lights* or *Panes* of one and the ſame Bigneſs you need meaſure but one, and multiplying by the Number of Times for the Content of them all. Alſo, in Meaſuring of *Saſh Squares* you need meaſure but one, multiplying by the Number of them. As for

EXAMPLE II.

Suppoſe, a *Window* of *Saſhes*, containing 12 Squares, and each Square of *Glaſs* is 108 Parts, or nearly one Foot, one Inch long and 71 Parts, or nearly 8 Inches and a half broad, and the Content required.

By × Multiplication.

	Feet.	*In.*	*P.*	
Length	1	1	0	
Breadth	0	8	6	
	0	8	8	
	0	0	6	6
	0	9	2	6
Multipl. by the No. of times				12
	9	2	6	0

By Decimals.

Length	108
Breadth	71
	108
	7 6
Total of one	7668
No. times	12
	15336
	7668
	9.2016

Now to reconcile theſe *two Ways*, you ſee by × Multiplication, the Total of the 12 *Squares* is 9 Feet, 2 Inches, and $\frac{6}{12}$, or half an Inch, and by Decimals, 9 Feet and 2016 Parts of 10000, or 20 of 100, which compared on the *Rule* will be found to be almoſt 2 Inches and a half. And here *obſerve*, That moſt *common two Foot Rules* have the Decimals ſet on the Edge, and are eaſily compar'd with the Inches, by fixing on any Number, and looking on the *Flatt* and *Edge* of the *Rule* at the ſame time. Thus were it required to find the Decimal to 11 Inches on the *Flat*, it is on the *Edge* almoſt 92: Again, 1 Foot 2 Inches and a half is almoſt 121. And ſo, on the contrary, would you know what is equal to any Number of Decimals in Inches, it is the ſame, *viz.* 90 decimally is 10 Inches and ¾, and a ſmall Matter more, 171 is 1 Foot, 8 Inches and a half, *&c.* *&c.*

To meaſure Circular or Oval Windows, take the ſame Breadth as their Diameters, as if they had been ſquare Windows, becauſe in cutting out the

Quarries of Glaſs there is a great Waſte made, and more Time expended therein than if it had been a ſquare Window.

The *PRICE.*

1. Glaſing with Squares and Quarries, in Lead Work, is from 5 *d.* to 8 *d.* *per Foot.*

2. Saſhes glazed with Crown Glaſs, puttied on both Sides, and Brads included, from 11 *d.* to 12 *d.* *per Foot.*

3. Ditto, with *Newcaſtle* Glaſs, at 7 *d.* or 8 *d.* *per Foot.*

4. Ditto, with waved or jealous Glaſs, at 1 *s.* 6 *d.* *per* Foot.

5. Ditto, with Plate Glaſs, Diamond-Cut, from 1 to 2 Foot, at 5 *s.* *per* Foot.

6. Ditto, from 2 to 3 Foot, at 5 *s.* 6 *d.* *per* Foot.

7. Ditto, from 3 to 4 Foot, at 6 *s.* *per* Foot.

8. As to the Price of Work in Squares, the Glaſier finding nothing but Work, Sodder, and Lead, at 2 *d.* ½ *per* Foot; Work only at 1 *d.* ½ *per* Foot.

9. To glaze with Quarries, the Workmen finding only Lead, Sodder, and Work, at 3 *d. per Foot*; Work only, at 1 *d.* ½ or 2 *d. per Foot.*

10. For taking down of Quarry-Glaſs, ſcowring it, ſoddering, banding, and ſetting up again, from 1 *d.* ½ to 2 *d. per Foot.*

11. The Glaſiers generally reckon, that 50 *lb.* of turned Lead, is ſufficient for 100 Foot of Quarry Glaſs.

SECT. VII.

Of PLUMBER'S *WORK.*

PLumbers Work is uſually done by Weight, *viz.* the great Hundred, or 112 *lb.* in covering of Flats, Roofs, Guttering, &c. there is generally allowed from 7 to 10 or 12 *lb.* to the Foot ſuperficial.

1. All Sheet-Lead, either caſt or mill'd, Sodder and Labour included, at 20 *s. per C.* At which Rate every Foot of Lead, weighing 7 *lb.* is worth 15 *d. per Foot.*

Ditto. Eight Pound, at 17 *d. per Foot.*

Ditto. Nine Pound, at 19 *d.* ¼ *per Foot.*

Ditto, 10 *lb.* at 1 *s.* 9 *d.* ¼ *per Foot.*

Ditto, 11 *lb.* at 1 *s.* 11 *d.* ½ *per Foot.*

Ditto, 12 *lb.* at 2 *s.* 1 *d.* ½ *per Foot.*

Note, The Charge of covering any Place with Lead, of any Thickneſs, may be eaſily found, by meaſuring the Superficies thereof, and by obſerving the Prices ſet down to the ſeveral Thickneſſes above.

2. Sheet Lead, excluſive of Sodder and Labour, from 18 *s.* to 20 *s. per C.*

3. All Rain Water Pipes, Rain-Water Ciſterns, Batten'd Ciſterns, and Lead-Pumps, at 1 *l.* 2 *s. per C.*

4. All Water-Pipes, from 3 Quarters to 7 Inches Bore, Labour included, at 20 *s. per C.*

5. Saſh Weights, &c. at 18 *s. per C.*

6. Soldering the Joints of Water-pipes, for three Quarters of an Inch Bore, at 2 *s.* 6 *d. per Joint.*

7. Ditto. One Inch, at 3 *s. per Joint.*

8. Ditto. One Inch and an half, at 3 *s.* 6 *d. per Joint.*

9. Ditto. For two Inches, at 4 *s.* 6 *d. per Joint.*

10. Ditto, for two Inches and an half, at 5 *s.* 6 *d. per Joint.*

11. Ditto, for three Inches, at 7 *s. per Joint.*

12. Ditto, for three Inches and an half, at 8 *s.* 6 *d. per Joint.*

13. Ditto, for four Inches, at 10 *s. per Joint.*

14. Ditto, for four Inches and an half, at 11 *s. per Joint.*

15. Ditto, for five Inches, at 12 *s.* 6 *d. per Joint.*

16. Ditto, for five Inches and an half, at 14 *s. per Joint.*

17. Ditto, for ſix Inches, at 16 *s. per Joint.*

18. Ditto, for ſix Inches and an half, at 19 *s. per Joint.*

19. *Ditto,* for ſeven Inches, at 1 *l.* 1 *s. per Joint.*

20. Sodder, at 8 *d. per lb.*

21. Braſs Cocks and Boſſes, from 3 Inches to an Inch and a Quarter Diameter, 1 *s.* 3 *d. per lb.*

22. *Ditto.* Sodder, Labour, ſetting on, and all Charges included, if Inch an a half Diameter, at 7 *s.* 6 *d.* each.

23. *Ditto,* Inch and a Quarter, at 5 *s.* 6 *d.* each.

24. *Ditto,* Inch, at 4 *s.* 6 *d.* each.

25. *Ditto,* three Quarters, at 3 *s.* 6 *d* each.

26. *Ditto,* half Inch, at 3 *s.* each.

27. If not Boſſes, deduct from the ſmall ones 4 *d.* the middle Size 6 *d.* and the largeſt 8 *d.*

28. Stop-Cocks, at 1 *s.* 3 *d. per lb.*

29. *Ditto,* with ſetting on, Sodder, Labour, *&c.* included, Inch and an half Diameter, at 8 *s.* 6 *d.* each.

30. *Ditto,* Inch and a Quarter, at 7 *s.* each.

31. *Ditto,* Inch, at 5 *s.* 6 *d.* each.

32. *Ditto,* three Quarters, at 4 *s.* 6 *d.* each.

33. *Ditto,* half Inch, at 3 *s.* 6 *d.* each.

34. Ball-Cocks, the Ball ſix Inches in Diameter, the Cocks one Inch, at 12 *s.* each.

35. *Ditto,* five Inches and 3 Quarters Diameter, at 9 *s.* each.

36. *Ditto,* four Inches and a half Diameter, at 6 *s.* each.

37. The general Allowance by Plumbers for old Lead, is 14 *s. per C.*

38. To exchange old Lead for Sheets new run, from 3 *s.* to 4 *s. per C.* for Labour and Workmanſhip.

39. For caſting of Old Lead, and the Plumber to return the ſame Weight that he received of old Lead, at 4 *s. per C.*

* * *

SECT. VIII.

Of PAVIOURS *WORK.*

PAviours Work is meaſured by the Yard Square, or three Foot each Way, containing 9 Square Feet, as before ſhewn in other Works.

1. New Pebble Paving, not leſs than 14 Inches deep, Work and all Materials, at 3 *s.* 6 *d.* *per* Yard. The Pebbles in each Yard ought to be three Hundred Weight.

2. *Ditto*, 15 Inches deep, Work and all Materials, at 4 *s.* *per* Yard. The Pebbles in each Yard ought to be 400 Weight.

3. *Ditto*, from 16 to 18 Inches deep, Work and all Materials, at 4 *s.* 6 *d.* *per* Yard. The Pebbles, in each Yard, ought to be 500 Weight.

4. New Purbeck Square Paving, 6 Inches thick, at 5 *s.* 6 *d. per Yard.*

5. If the hard blue Sort, at 6 *s. per Yard.*

6. New *Flanders* Brick-Paving, at 3 *s.* 6 *d. per Yard.*

7. New Purbeck Square Paving, 4 Inches thick, at 4 *s.* 6 *d. per Yard.*

8. If the hard Sort, at 5 *s. per Yard.*

9. New Ragg Paving or Bowlers, at 2 *s.* 6 *d. per Yard.*

10. Pebble Paving or Raggs taken up and new laid, Gravel included, at 6 *d. per* Yard.

11. Purbeck Paving, Work only, (Gravel included,) at 6 *d. per* Yard.

12. For Paving with Red Bricks, Work and all Materials, at 1 *s. per* Yard; Work only 5 *d. per* Yard.

13. Ditto, white Bricks, at 1 *s.* 6 *d. per* Yard.

14. Paving with Clinkers, at 2 *s.* 4 *d. per* Yard.

15. Paving with 9 Inch *Pammants*, Work and all Materials, at 2 *s.* 6 *d. per* Yard, Work only 6 *d. per* Yard.

16. Free Stone Pavements, cut into promiſcuous Lengths and Breadths, at 3 *s. per* Yard.

17. White Marble veined with Red, *&c.* in Squares for Paving, at 5 *s. per Foot.*

18. Pavement of *Portland* Stones fit for Halls, at 1 *s.* 6 *d. per Foot.*

See more of Paving in Sect. V. No. 13, 14, 15, 16. page 84.

Note, The Prices are calculated according to the Prices of the Materials, ſet down in *Sect.* I.

To know how many Paving-Tiles, Bricks, *&c.* will pave a Floor. Note,

That	36	Tiles	6	Inches ſquare, will Pave a Yard ſquare.
	20¼		8	
	16		9	
	13		10	
	9		12	

Statute Bricks laid flat 32 to a Yard ſq.
White Lumps laid flat 32 to ditto.
Bricks or Lumps laid Edgeways 48 to dit.
Dutch Clinkers 90 to ditto.

SECT. IX.

Of PAINTERS *WORK.*

PAinters meaſure their Work by the Yard Square, in the ſame Manner as the Joiners, only with this Difference, that inſtead of accounting Doors and Window-ſhutters Work and half, they have double Work, as being painted on both Sides; and they alſo meaſure all Edges, *&c.* where the Bruſh goes.

1. Saſh-Frames, at 1 *s.* each, and the Lights at 1 *d.* each.

2. Window-Lights and Caſements, at 3 *d.* each.

3. Outſide-Painting, three times in Oil, if well done, is worth from 6 *d.*

to 8 *d. per* Yard. Inſide-Painting, new Work of common Colours, at 6 *d. per* Yard.

4. Inſide Painting, old Work of common Colours, at 4 *d. per* Yard, but of extraordinary Colours, as,

5. Olive Colours, at 8 *d. per* Yard.

6. *Pruſſian* Blue, at 10 *d. per* Yard.

7. Greens, at 1 *s. per* Yard.

8. Modillion Corniſhes, from 6 *d.* to 1 *s. per Foot* running.

9. Common Outſide Corniſhes, at 2*d. per Foot* running.

10. Iron Bars, at 1 *d.* each, or more if very large.

N. B. All Carving in Rooms, and Outſide Frontiſpieces to Doors, *&c.* are ſo various, that they muſt be valued by the Time and Materials expended.

11. White Lead, Pearl-Colour, Lead-Colour, Cream-Colour, Stone-Colour, Wainſcot or Oak-Colour, ground in Oil, at 4 *d. per* ℔; one Pound of any of which Colours, with Oil, will paint 8 Square yards.

12. Chocolate-Colour, Mahogony-Colour, Cedar and Walnut-tree-Colour,

ground in Oil, at 6 *d.* *per* ℔; 1 pound of any of which Colours, with Oil, will paint 10 Square yards.

13. Gold-Colour, Olive-Colour, Pea-Colour, fine Sky Blue mix'd with *Pruſſian* Blue, Orange-Colour, Lemon Colour, Straw-Colour, Pink-Colour, and Bloſſom-Colour, ground in Oil, from 10 *d.* to 1 *s.* *per* ℔; one pound of any of theſe Colours, with Oil, will paint 8 Square yards.

14. Fine deep Green ground in Oil, at 2 *s.* 6 *d.* *per* ℔; one pound of which, with Oil, will paint 20 Square yards.

15. One pound of Firſt Primer, ground in Oil, will paint 20 Square yards.

16. One pound of Second Primer, ground in Oil, will paint 12 Square yards.

The Oils uſed in Houſe-Painting, are,

Linſeed Oil, at 10 *d.* *per* Quart.

Turpentine Oil, at 1 *s.* *per* Quart.

Beſt drying Oil, at 1 *s.* *per* Quart.

Painting Bruſhes of ſeveral Sizes, from 2 *d.* to 6 *d.* each.

Putty, at 4 *d. per* ℔.

Double Size uſed by *Painters* for the priming new Work, at 4 *s. per Firkin*, or 2 *d. per* Quart.

Single Size, at 1 *s.* 6 *d. per Firkin*, or 1 *d. per* Quart.

SECT. X.

Of THATCHERS *WORK.*

THatchers meaſure their Work by the Square, and their Dimenſions are taken the ſame as for Tileing, for which ſee the ſecond Article of *Sect.* IV. page 74.

1. Thatching, Work and all Materials, at 10 *s.* 6 *d. per* Square; Work only, at 4 *s. per* Square.

2. To a Square of Thatching, there is required two thirds of a Load of Straw, one Bundle of Laths, 40 Withs, or a pound of Rope-yarn, 40 Thatching Rods, and 200 of Nails.

SECT. XI.

Of BLACKSMITHS *WORK.*

BLackſmiths Work is done by the *Pound Weight.*

1. All Sorts of hammer'd Work, as, Chimney-Bars, Stays, Upright Window-Bars, Shutter-Bars, Pump-Work, Bolts, Saddle-Bars, Cramps, Holdfaſts, Dogs, Gudgeons, Hoops, and all Black-Work of the ſame Nature, at 3 *d.* ½ and 4 *d. per* ℔.

2. Caſements for Windows, Croſs Window-Bars fil'd, and Work of the like Nature, from 4 *d.* ½ to 6 *d. per* ℔.

3. Iron Doors and Shutters, at 10 *d. per* ℔.

4. Pins, Hooks, Chains, *&c.* to Stable-Bails, at 4 *d. per* ℔.

Of Nails.

5. The general Sorts, are, Bill Brads, Gunners Brads, PlainBrads, Dye Hobbs, Shidder Hobbs, Thick Hobbs, Claſp Hobbs ;

Lead Nails, Draw Nails, Desk Nails, Roſe Nails, Flat-head Nails, Flat-point Nails, Scupper Nails, Sharp Nails, Middle Nails, Square Nails, and Pike Nails, all which are ſold by the 1000, and including them all, they are from 8 *d.* to 12 *s.* *per* 1000.

6. Flat pointed Nails are ſold by the Hundred Weight, of which there are 6 Sorts, and are ſold from 1 *l.* 9 *s.* to 1 *l.* 11 *s.* *per* Hundred Weight.

7. The other Sort of Nails, *viz.* Batten Brads are ſold by the 1000, of which there are ten Sorts, and are ſold from 8 *d.* $\frac{1}{2}$ to 2 *s.* 10 *d.* *per* 1000.

8. Clout Nails are ſold by the 1000, of which there are two Sorts, and are ſold from 2 *s.* 1 *d.* $\frac{1}{2}$ to 2 *s.* 10 *d.* *per* 1000.

9. Clout Brads are ſold at 3 *s.* 6 *d.* *per* 1000.

10. Pound Nails are ſold by the Hundred Weight, of which there are five Sorts, and are ſold from 1 *l.* 12 *s.* to 1 *l.* 15 *s.* *per* Hundred Weight, or from 4 *d.* to 4 *d.* ½ *per* ℔.

11. Dog Nails are ſold by the 1000, of which there are three Sorts, and are ſold from 3 *s.* 9 *d.* to 5 *s.* 9 *d.* *per* 1000, or from 4 *d.* to 4 *d.* ½ *per* ℔.

12. Jobent Nails are ſold by the 1000, of which there are five Sorts, and are ſold from 10 *d.* ½ to 1 *s.* 6 *d.* ½ *per* 1000.

13. Ribbing Nails, there are ſeveral Sorts, *viz.* from 5 to 10 Inches, and are ſold at 27 *s.* *per* Hundred Weight.

14. Round-Head Nails are ſold by the 1000, of which there are nine Sorts, and are ſold from 11 *d.* ½ to 5 *s.* 5 *d.* *per* 1000.

15. Glaſiers Sprigs are ſold by the Thouſand, of which there are three Sorts, they are ſold from 7 *d.* ½ to 8 *d.* ¾ *per* Thouſand.

16. Timber Nails are of ſeveral Sorts, *viz.* from 6 to 15 or 16 Inches, and are ſold at 1 *l.* 10 *s.* *per* Hundred Weight.

17. Joiners Rivets are ſold by the Pound, and are from 4*d.* to 4*d.* ½ *per* ℔.

Of Hinges.

18. HL. Hinges, the beſt are ſold by the Pair, *viz.* thoſe of 6 Inches in Length at 9 *d. per Pair*; 7 Inches at 10*d.* 8 Inches, at 1 *s.* 1 *d.* 9 Inches at 1 *s.* 2 *d.* 10 Inches, at 1 *s.* 6 *d.* 11 Inches, at 2 *s.* and 12 Inches, at 2 *s.* 9 *d. per Pair.* There are larger Sizes, at 10 *d. per* lb.

19. HL. Hinges, with Riſing Joints, are ſold by the Pair, *viz.* thoſe of 7 Inches in Length, at 1 *s.* 3 *d.* 8 Inches 1 *s.* 5 *d.* 9 Inches 1 *s.* 10 *d.* 10 Inches at 1 *s.* 11 *d.* 11 Inches at 3 *s.* and 12 Inches at 3 *s.* 9 *d. per Pair.*

20. Pew Hinges are ſold by the Dozen, the Lengths are from 6 to 10 Inches, and are ſold from 9 *s.* 6 *d.* to 1 *l.* 6 *s.* *per* Dozen.

21. Shutter-Hinges are ſold by the Dozen, *viz.* Thoſe of 6 Inches in Length at 7 *s.* 3 *d.* 7 Inches, at 10 *s.* 6 *d.* 8 Inches at 12 *s.* and thoſe of 9 Inches at 16*s.* 6*d.* *per* Dozen.

22. Side Hinges are ſold by the Dozen, *viz.* thoſe of 5 Inches in Length, at 4 *s.* 9 *d.* *per* Dozen, 6 Inches at 6 *s.* 7 Inches at 8 *s.* 6 *d.* 8 Inches at 10 *s.* 6*d.* 9 Inches at 12 *s.* and thoſe of 10 Inches at 13*s.* 6*d.* *per* Dozen.

23. Dove-tailed Hinges, the beſt are ſold by the Pair, of which there are 5 ſorts, and are ſold from 3 *s.* to 5 *s* 9 *d.* *per* Pair: The ordinary ſorts are from 2 *d.* to 6 *d.* *per* Pair.

24. Black Hinges, Cheſt Hinges, Cheſt Haſps, Hooks and Hinges, Scuttle Hinges, Strap Hinges, are ſold by the Dozen, and are from 3 *s.* 6 *d.* to 11 *s.* *per* Dozen.

25. + Garnet Hinges with Riſing Joints, are ſold by the Dozen, and are from 5 *s.* 9 *d.* to 16 *s.* *per* Dozen.

26. + Garnet and Scuttle Hinges, are ſold at 1 *l.* 12 *s.* 6 *d.* *per* Hundred Weight.

27. + Garnet Hinges with filed Joints, are ſold at 1 *l.* 17 *s.* 6 *d.* *per* Hundred Weight.

28. Hinges with Hooks, are ſold at 1 *l.* 10 *s.* *per* Hundred Weight, and if they have Stay-Hooks, then they are ſold at 1 *l.* 12 *s.* or 1 *l.* 12 *s.* 3 *d.* *per* Hundred Weight.

49. There are cheaper ſorts of Hinges. viz. *Lancaſhire* Hinges, Balcony Hinges, Dove-tail'd Hinges, Cheſt-Hinges, + Garnet Hinges, Shutter Hinges, and Side Hinges, which are ſold from 1 *s.* to 1 *l.* 11 *s.* *per* Dozen.

30 Smooth filed Hinges, *viz.* Box Hinges, Balcony Hinges, Cheſt Hinges, Clock caſe Hinges, Desk Hinges, Pew Hinges, Shutter Hinges, and Side Hinges, of which there are ſeveral ſorts, and are ſold from 1 *s.* to 2 *l.* 3 *s.* *per* Dozen; ſome ſmooth filed Hinges are ſold from 4 *s.* to 7 *s.* 6 *d.* *per* Pair.

31. Hold-faſts and Wall-Hooks are ſold at 1 *l.* 13 *s.* *per* Hundred Weight; thoſe for Joyners Uſe, are ſold at 4 *d.* *Half-penny* per lb.

32. Hooks and Eyes for Gates are ſold from 3 *d* ½ to 4 *d. per* ℔.

33. Long tined Latches are ſold by the Dozen, of which there are Eight Sorts, and are ſold from 2 *s.* 4 *d.* to 8 *s. per* Dozen.

34. Varniſhed Latches, of which there are five Sorts, and are ſold from 2 *s.* 7 *d.* to 8 *s.* 2 *d. per* Dozen.

35. Spring and Thumb Latches, of which there are nine Sorts, and are ſold from 3 *s.* 7 *d.* to 14 *s.* 6 *d. per* Dozen.

36. Latches with Braſs Knobs, of which there are three Sorts, are ſold from 14 *s.* to 18 *s. per* Dozen.

37. Rimmed Latches of ſundry Sizes, of which ſome are Iron-caſed, ſome Braſs-caſed, and ſome Sliding-caſed, are ſold from 2 *s.* to 15 *s.* each.

Of Locks.

38. D. Gate-Locks, if 2 or 3 *Steel* Wards; *Slit* Key or *Letter* Key, are

ſold from 2 *s.* 6 *d.* to 14 *s.* 6 *d.* *per* Dozen.

39. Hanging Locks, Pad-Locks, and Slit Key Locks, are ſold from 3 *s.* 6 *d.* to 16 *s.* 6 *d.* *per* Dozen.

40. Bridg'd and ſecret Pad-Locks, are ſold from 9 *s.* to 16 *s.* 6 *d.* *per Dozen*; ſome are ſold by the ſingle Lock, from 1 *s.* 8 *d.* to 5 *s.* 9 *d.* *per* Lock.

41. Cabinet Locks, Box Locks, Cupboard Locks, and Till Locks [whether in ſute or not] are ſold from 3 *s.* 9 *d.* to 16 *s.* *per Dozen.*

42. Cabinet Locks, Till Locks, and Scruitore Locks, in Sute 5 Locks and one Key, from 2 *s.* to 7 *s.* 3 *d.* *per* Sute. There are higher priced Ones, but not of common Uſe.

43. Of Inſide Locks for Cheſts, Desks, Tills, Cupboards, and Boxes, there are ſeveral Sorts, *viz.* + Keys, + Wards, ++ Wards, ++ and Bullet Wards, S. Bitted, *&c.* which are ſold from 3 *s.* 4 *d.* to 1 *l.* 17 *s.* 6 *d.* *per Dozen.*

Ditto, not ſold in Dozens, from 2 *s.* 3 *d.* to 11 *s.* *per* Lock.

44. Iron rimmed Locks, are of ſundry Sorts, *viz.* once Dead, twice Dead, with Pull backs, and Braſs Knobs; one Bolt, two Bolts, and three Bolts, plain, and the Wards round. Braſs rimmed Locks, Cloſet with Spindles not caſed, Caſed, and ſliding caſed, are ſold at various Prices from 1 *l.* to 1 *l.* 10 *s.* each. Theſe are likewiſe ſold in Sute, of which there are 26 Sorts, and are ſold from 1 *l.* 15 *s.* to 7 *l.* 5 *s.* *per* Sute.

Ditto, Single, from 1 *s.* to 30 *s.*

45. Plate Cloſet Locks are ſold from 11 *s.* 6 *d.* to 1 *l.* *per Dozen.*

Ditto, with Screws from 18 *d.* to 3 *s.* 6 *d.* each.

Ditto, with double Springs, from 2 *s.* to 17 *s.* each.

Ditto, with ſingle Springs, from 6 *s.* 6 *d.* to 9 *s.* each.

45. Baſtard Banbury Stock-Locks, are ſold from 6 *s.* to 9 *s.* *per* Dozen.

46. Livery Stock Locks, are ſold from 7 *s.* to 25 *s.* *per* Dozen.

47. Plate Stock-Locks, from 8 *s.* 6 *d.* to 26 *s.* *per* Dozen.

48. Spring Stock-Locks, twice Dead and Spring, are ſold from 2 *s.* 3 *d.* to 10 *s.* each.

Ditto, In Sutes, from 11 *s.* to 2 *l.* each.

Of Bolts.

49. Balcony Bolts by the Dozen, from 6 *s.* to 29 *s.* *per* Dozen.

Ditto, by the Pair, from 3 *s.* to 12 *s.* 6 *d.* *per* Pair.

50 Spring Bolts and Saſh Bolts are ſold from 18 *d.* to 9 *s.* 6 *d.* *per* Dozen.

51. Shutter-Bolts are ſold from 10 *s.* 6 *d.* to 18 *s.* 6 *d.* *per* Dozen.

SECT. XIII.

Directions for applying the preceeding Rules to Practice, in Eſtimating the Charge *of erecting any Houſe of any Height and Bigneſs, built of Brick and Timber.*

AS it is neceſſary for every Perſon before he begins to erect a Building, to have Deſigns or Draughts drawn upon Paper, Vellum, *&c.* as well for Eaſe and Expedition as for the preventing Miſtakes in carrying on the intended Deſign; ſo likewiſe is it abſolutely neceſſary for the Prevention of Errors in Eſtimating the Charge thereof. And in large Structures it were not amiſs if a MODEL be made of the Whole, either in *Paſtboard*, *Wood*, *Clay* or the like, whereby all the *Fabrick* would be ſeen at once in Miniature: However, when you are to eſtimate the Charge of erecting any Building, the Length, Breadth, Height, &c. being given; firſt draw a *Draught*, of the *Ground-Plot* or *Ichnography* of each Floor in a particular Paper by itſelf, with the Length, Breadth, and Height of each Apartment intended, becauſe many Times the Conveniencies or Contrivances in one Story differ from thoſe in another, either in the Bigneſs of the Chimnies, or Diviſion of the Rooms, ſome being larger in one Story than in another; as alſo the Form and Faſhion of each Front, together with Doors, Windows, and Ornaments (if any be deſigned) are to be ſhewn in the *Orthographies*, or *Draughts* of the Uprights: And if for a Timber Building, the Scantling or Dimenſions of every particular Piece I would adviſe to be ſet in its proper Place to which they belong in the *Diagrams*, in Characters, which will be of Uſe to the Workmen, in carrying on their Work more readily, as well as for Eſtimating the Charge.

The *Draught* being drawn, and the Dimenſions of every Particular being inſerted as before deſcribed, you may then proceed to the Eſtimation thereof.

Firſt, Begin with the Outſide Body or Carcaſe, and conſider how much Brick-work, and of what Sort of Work and what Timber-Work is contained therein, and Eſtimate that firſt. Secondly, Proceed to the Roof, and conſider of the Timber-Work and Tileing, and Eſtimate that. Thirdly, Conſider how many Windows, and of what Sort, and what Caſements are required, and the Charge of Glazing them, what Doors and Door-Caſes, and of what Sort; the Frontiſpieces (if any) and of what Order; the Corniſh for the Eaves (if any) and of what Sort, whether a Dental Corniſh, a Modillion Corniſh, or a Cove-Eaves.

4. What Rough Caſting, and of what Sort.

5. Conſider, If there is any Stone-Work in the Front, and of what Sort.

6. Return to the Inſide Work, and conſider what Partitions, either of Brick or Timber, what Doors and Door-caſes, and of what Sort, there is contained in each Room, and what Locks, Bolts, and Hinges are required thereto.

7. What Sort of Timber Floors, boarded Floors, and Cloſets belonging to each Room.

8. How many Stair-Caſes, and of what Sort.

9. How many Rooms to Wainſcot, and of what Sort of Work, how many Window-Shutters to make, and what Sort, and what Nails, Bolts, and Hinges, are required thereto.

10. What Cielings and Walls to plaiſter and white-waſh, and of what Kind of Work.

11. How many Windows to caſe or line up; and laſtly, how many Floors of Brick or Stone to pave.

Note, As ſoon as the *Draught* is drawn, to prevent Miſtakes in Eſtimating, read over the preceeding Rules, and as ſoon as you meet with any one Article that ſuits your preſent Purpoſe, there ſtop, and meaſure that Part of the *Building* firſt, as taught in its proper Place in the foregoing Sections, to which you muſt have Recourſe, both for the Method of Meaſuring, and alſo when you have eſtimated that Part, write it down, and proceed to read again the Rules for Eſtimating, till you have gone through all the Articles in your preſent Undertaking; and thereby you will Eſtimate the Whole, and not be ſo liable to forget any Article as otherwiſe you would. *Alſo*,

After you have gone through Eſtimatihg every Particular of the Building you can think of, you muſt ſtill add ſomething for unſeen or unthought of Articles; for which you muſt allow 5, 10 or 20 Pounds, *more* or *leſs*, according as you ſhall judge neceſſary, becauſe there are many trifling *Jobbs* not to be thought of in Eſtimating.

SECT.

SECT. XIII.

BY having the Magnitude of a *Room* to know what *Light* is ſufficient for the ſame, together with the Number of Windows and their Proportions ſuitable thereto, alſo to regulate the Bigneſs of the *Chimney*, *viz.* the Breadth, Height, Depth, and Square of the Funnel that it may not be liable to ſmoak.

Of LIGHT.

To know what Light is proper for any *Room*,

The RULE *is*,

Let the Dimenſions of the *Room* be given, *viz.* The Length, Breadth and Height, multiply the Length and

Breadth of the *Room* together, and the Product by the Height, the Square Root of their Product, is the Quantity of *Light* required.

EXAMPLE I.

Suppoſe a *Room* was 24 Feet long, and 16 Feet broad, and 14 Feet high, how much *Light* would be proper.

The Length and Breadth multiplied is 384 Feet, and that Sum multiplied by the Height, *viz.* 14 Feet, the Product is 5376 Feet, whoſe Square Root is 73 Feet 3 Inches, which is the Quantity of *Light* required.

The Intent of this *Proportion* is to avoid the common Errors, which run to Extremes, of making a Room too glaringly *Light*, or (what is worſe) too gloomy, and dark: And here it is to be obſerved, that moſt Windows when of a proper Size, have between 20 and 30 Feet in the Superficial Content of each, *viz.* from 3 to 4 Feet in Breadth, and from 6 to 8 Feet in Height; ſo that the *Room*, by this Example, ſhould have three Windows therein, each containing 24 Feet 5 Inches in the Superficial Content.

EXAMPLE II.

Suppoſe, a *Room* is a *Cube*, or perfectly *Square*, *i. e.* equal in Height, Length and Breadth, and admit that to be 12 Feet, which being multiplied each by the other as before, the Product will be 1728, whoſe Square Root will appear to be 41 Feet 6 Inches and an half near, and ſhould have 2 Windows therein, containing 20 of 9 Inches and a Quarter Superficial in each, and this RULE is univerſal for all *Rooms* whatſoever.

Of CHIMNIES.

As *Chimnies* and *Chimney-Pieces* are a great Ornament to *ROOMS*, as well as convenient in cold Climates, and the Bigneſs of them as to Height, Breadth and Depth, have hitherto been only gueſs'd at, and (for the moſt Part) ſet out, as it were, by Chance, I have here calculated a Table, which will be ſuitable to all Purpoſes, *viz.* *Cloſets*, *Rooms*, *Halls*, *Kitchins*, *&c.* beginning with a Chimney of twice its Breadth, in Height, to a Chimney of twice its Height in Breadth adapted to, and from a *Cloſet* of Six Feet Square to a *Hall*, *&c.* of Sixty Feet Square.

* * *

TABLE I.

If the *Square* of the *Room* be	Then ſhould the *Breadth* of the *Chimney* be		And their *Heights* are		And their *Depths* from the *Front* to the *Back* is	
Square Feet.	*Ft.*	*Inc.*	*Ft.*	*Inc.*	*Ft.*	*Inc.*
6	1	6	3	0	1	1½
9	2	0	3	1½	1	3⅜
12	2	6	3	3	1	5¼
15	3	0	3	4½	1	7⅛
18	3	6	3	6	1	9
21	4	0	3	7½	1	10⅞
24	4	6	3	9	2	0¾
27	5	0	3	10½	2	2⅝
30	5	6	4	0	2	4½
33	6	0	4	1½	2	6¾
36	6	6	4	3	2	8¼
39	7	0	4	4½	2	10⅛
42	7	6	4	6	3	0
45	8	0	4	7½	3	1⅞
48	8	6	4	9	3	3¾
51	9	0	4	10½	3	5⅝
54	9	6	5	0	3	7½
57	10	0	5	1½	3	9⅜
60	10	6	5	3	3	11¼

But becauſe there will fall out ſeveral Bigneſſes between thoſe in the foregoing TABLE, I have here made *another*, between ſome of the moſt uſeful Sizes therein, by which it will be eaſy to calculate any others.

TABLE II.

Feet	*ſqu.*		*Feet.*	*Inch.*		*Feet.*	*Inch.*
15	0	The Breadth of the *Chimney* ſhould be	3	0	And their *Heights* are	3	4½
15	6		3	1		3	4¾
16	0		3	2		3	5
16	6		3	3		3	5¼
17	0		3	4		3	5½
17	6		3	5		3	5¾
18	0		3	6		3	6
18	6		3	7		3	6¼
19	0		3	8		3	6½
19	6		3	9		3	6¾
20	0		3	10		3	7
20	6		3	11		3	7¼
21	0		4	0		3	7½
21	6		4	1		3	7¾
22	0		4	2		3	8
22	6		4	3		3	8¼
23	0		4	4		3	8½
23	6		4	5		3	8¾
24	0		4	6		3	9

As theſe Tables are calculated for *Square Rooms*, it will be proper to ſhew, how they may be applied to *Rooms* that are longer than broad, by making a *mean Proportion* (as *Palladio* has judiciouſly done for the Height of *Rooms* in his firſt Book, *Chap.* 23.) of which there is *three Caſes* that may be applied to the Side, End, or Angle of a *Room*, as the Builder ſhall think proper.

CASE I.

Add the Length and Breadth together, and take the Half of that Sum for the Square of the *Room*.

CASE II.

Multiply the Length by the Breadth, and take the Square Root of that Product for the Square of the *Room*.

CASE III.

Multiply the Length by the Breadth, (as in the Second Caſe) and add the Length and Breadth together as in the firſt, then divide the Product of the ſecond,

cond, by half the Sum of the firſt, and take the Quotient for the Square of the *Room*. Thus:

EXAMPLE I.

Suppoſe a *Room* be 24 Foot long, and 16 Feet broad, which added will be 40 Feet. The Half of which is 20 Feet; the Square of the *Room* ſought for by the firſt Rule.

EXAMPLE II.

Admit, as before, 24 be multiplied by 16, the Product will be 384. The Square Root of which is 19 Feet 7 Inches, $\frac{1}{4}$ *fere*, which is the *Mean* by the ſecond Rule.

EXAMPLE III.

Suppoſe, as before, the Product ſought for is 384 in the Second Rule, and the Half of the Sum as in the firſt be 20: Then divide 384 by 20, the Quotient will be $19\frac{1}{5}$, the third *Proportion* by the third Rule. Either of theſe *Proportions* may be uſed as the *Conveniency* or *Ornaments* ſhall require.

But ſhould it happen, that a *Room* ſhould be ſo large, that *two Chimnies* ſhould be thought more ornamental or convenient than one, it will then be proper to divide the Length of the *Room* in two, and then by the whole Breadth and half the Length, you may find a *Mean Proportion.* As for

EXAMPLE IV.

Suppoſe, a *Room* be 90 Feet long and 30 Feet broad: Then half the Length is 45, and the *Proportion* (according to the firſt Rule) is 37 Feet and an Half.

Again, Suppoſe a *Room* be 60 Feet long, and 30 Feet broad, half the Length is 30: Then will 30 Feet be the Square of the Room required, ſo that two *Chimnies* of the *Proportion* of a 30 Foot Room will be ſufficient for a Room of 60 by 30.

To

To find the Depth of all Chimnies *from the Front to the Back, this* RULE *is* general, *viz.*

Add the Breadth and Heighth together, and take *one fourth* of the Sum for the *Depth* : As for

EXAMPLE V.

Suppoſe, a *Room* be 18 Feet ſquare, which you will find in the firſt Column of the firſt *Table*, and againſt it in the ſecond Column you will find 3 Feet 6 Inches, the Breadth, and in the third Column 3 Feet 6 Inches the Height, which being added together is 7 Feet, one fourth of which is one Foot nine Inches the Depth of the *Chimney* in the fourth Column.

Again, Suppoſe a Room be 20 Feet ſquare, which having found in the ſecond *Table*, the Breadth will be 3 Feet, 10 Inches, and the Height 3 Feet, 7 Inches, and being added together, makes 7 Feet 5 Inches, one fourth of which is 1 Feet 10 Inches $\frac{1}{4}$, the Depth of the *Chimney* required.

As to the Reſt, or all that need be further ſaid, will be eaſy to comprehend if you conſider, that from 6 Feet to 60 Feet (the Squares of the Rooms) that to every 6 Inches in the Bigneſs of the Room, it adds 1 Inch to the Breadth of the *Chimney*, and adds $\frac{1}{4}$ Inch to the Height, as is plain by inſpecting the *Second Table* :

Then for the Bigneſs of the Funnel ſo as to clear the Smoak, obſerve this *General* RULE.

Take three fourths of the *Depth* of the *Chimney* for the Side of the Square of the Funnel.

An EXPLANATION *of the Four following* TABLES, *viz.*

THE firſt Row of Figures on the left Side of each Table, ſhews the Scantling or Size of one Side of the Piece; and the Scantling of the other Side of the Piece, is in the uppermoſt Row of Figures, and the Price thereof, in each of the other Squares. The firſt Figure in each Square, ſtands for Pence, and the other for Farthings.

Example, *Table* I.

SUppoſe you would know the Price of one Foot of Stuff, whoſe Sides are 10 Inches by 5: Firſt, Look on the Left-Hand Side of the Table for the largeſt Scantling, which in this Example is 10 Inches; and from thence, guide your Eye in a ſtraight Line untill you come right under 5, on the Top of the Table; the Scantling of the other Side, and in the Angle of Meeting, you will find ſet down 5, 0, which is 5 *d.* being the Price ſought.

The ſame Rule is to be obſerved in finding the Price to any other Scantling in either of the Tables.

EXAMPLE II.

Suppoſing it were required to find the Price of a Foot of Stuff, whoſe Scantling is larger than any in the Tables, as 22 by 18.

Table I. RULE. Firſt, Take the Half of both the Scantlings, and look the Price thereof in the Tables, and four Times that Price, is the Price ſought. The Half of the Scantling given, is 11 by 9, and the Price of it, by the firſt Table, is 10 *d.* Farthing, and four Times that Price, is 3 *s.* 5 *d.* the Price ſought for. The ſame of any other.

Either of theſe Tables may be uſed for as much again as they are made for, by only doubling the Price ſet down; or for Half ſo much, by taking Half the Price ſet down.

I have now gone through what I propoſed, and have only this to add, That I hope the READER will make proper Allowances in Prices, when better Work and Materials, ſhall exceed the Deſigns of theſe Computations, and wiſh, that this Treatiſe may prove as uſeful as I intended, *viz.*

To inſtruct Others,

In which, if my Wiſhes do not ſucceed, I ſhall reſt ſatisfied with the ſecret Pleaſure of having intended well, and think my Time not miſapplied, becauſe it hath been ſpent in an agreeable as well as an innocent Amuſement.

FINIS.

N.B. The Author W. SALMON, of *Colcheſter* in *Eſſex*, and the Reviſor E. HOPPUS, *Surveyor* of the *London Aſſurance* in *Cornhill*, *London*, makes Deſigns of Buildings for Gentlemen, and others, and eſtimates the ſame with Meaſuring and Valuing of all Kinds of Work (already done) on moderate *Terms.*

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